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ADDRESSES.

THE PRESIDENT'S ADDRESS.¹

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OF PHILADELPHIA.

Two duties seem to me to devolve on the President of the American Medical Association in his annual address: (1) To consider the condition of the Association, with any suggestions that may be made for improvement, and (2) to take up some subject of professional interest which may be properly considered before the chief representative medical body of the United States.

In pursuance of the former, it is a great pleasure to me to congratulate the Association on its marked prosperity. The American Medical Association now numbers about 9000 members. A large number, truly, but when we consider that there are over 100,000 regular physicians in the United States, it is strange and anomalous that this Association should comprise less than one in ten of these physicians. I call your attention to this important matter in order that every member of the Association during the coming year shall try at least to induce another fellow physician to join the Association and thus double its influence for good.

Journal of the American Medical Association.—One of the most important functions of the Association is the publication of *The Journal*. Here, again, I have only words of encouragement. The number of subscribers to *The Journal* is about 15,000—a number, undoubtedly, in excess of that of any other medical journal in the United States, and I suspect only surpassed by the *British Medical Journal*, which publishes over 21,000 copies weekly. But it is not only on the number of subscribers that the Association is to be congratulated, but especially on the quality of the papers published in *The Journal*. It is, however, not only idle words of vague praise that we should bestow on the trustees and the able editor of *The Journal*, but we should recognize that never before in the history of *The Journal* has it been so well conducted, its pages so filled with admirable original articles and its influence for everything that makes for the best in medicine so potent as at present.

The Rush Monument Fund.—Dr. Albert C. Gihon resigned at the last meeting as the Chairman of the Rush Monument Committee. It seemed to me that his successor should be a physician rather than a surgeon, and from Dr. Rush's native city. Accordingly, I appointed Dr. James C. Wilson to the vacancy.

The Committee report actually in hand a little over \$11,000. This sum is too large to go backward, and it is not enough to go forward. In the hands of various State organizations, and possibly others, there are several thousands of dollars, I believe, which have been pledged to this fund. I recommend that action be taken, looking to the early completion of the fund. All the more is this suitable, when we remember that there will be erected in the city of Washington this year, or early next, a costly monument to Hahnemann, for which Congress has given a site.

The Antivivisection Bill.—Early in the session of the present Congress, there was introduced into the Senate, bill No. 34, commonly called the "antivivisection bill." The immense detriment that this would work both to man and animals was so evident that I deemed it my duty as your President to take the most active steps to prevent its becoming a law. I sent out letters to the president and secretary of every State medical society in the country, to prominent members of the profession in every State, to a large number of influential men in the profession all over the country, and to college presidents, and others who could direct public opinion, and by all means in my power strove to arouse a public sentiment against the bill. I wish to bear public testimony to the enthusiasm and the unanimity with which my appeals were received. The profession in every part of the country responded nobly and exercised a wide and, I believe, an enduring influence on senators and representatives in establishing and confirming their judgment against the inhumanity of any such bill.

In response to a communication addressed to the chairman of the Senate Committee on the District of Columbia, a hearing was granted in Washington before the subcommittee having charge of the bill, at which both the friends and the opponents of the measure were present and presented their arguments. Among those who spoke against the bill were Drs. William H. Welch,¹ Henry P. Bowditch, H. A. Hare, William Osler, Mary Putnam Jacobi, George M. Kober, Howard A. Kelly, D. E. Salmon, Brig.-Gen. George M. Sternberg, Surgeon-General U. S. A., Bishop Lawrence, of Massachusetts, and myself. Certainly a more able array of speakers could hardly have been obtained, and I wish in your name, and in the name of humanity, to thank them for their self-sacrificing help.

Although in two prior Congresses the Committee on the District of Columbia had unanimously reported in favor of the bill, I am happy to say to you that the present committee has so

¹ Delivered at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

¹ The Journal, May 19th and 26th.

far changed its views that I have reason to believe that the bill will either slumber in committee or be reported negatively. While it is to be hoped that this is the end of the present bill, it is by no means certain that it is the end of the agitation of those who are so blind to the progress of medicine and, therefore, to the dictates of humanity, but, I have no doubt that the effort will be renewed at some future time. If this should take place, I commend to the then President of the American Medical Association the duty of opposing the bill with all the vigor which he can use.

Among the important contributions to antivivisection literature evoked by this discussion, none is more valuable than the letter addressed to the Chairman of the Committee on the District of Columbia, in opposition to the bill, by President Eliot, of Harvard College, which was presented to the readers of the *MEDICAL NEWS* in the issue of May 26th, page 832.

Coming from such a high source, I can not but feel that it will carry conviction, both by the force of its statements and the lucidity of its logic. I call your especial attention to the ground taken by President Eliot, that it is the antivivisectionists who are inhumane and cruel to the last degree, because they would condemn both man and animals to suffering and death by impeding the progress of medical science.

Members of the American Medical Association.

—By its constitution, the members of the Association consist (1) of delegates; (2) of members by invitation; (3) of permanent members, and (4) of members by application. I wish to call your attention to the desirability of limiting the members by invitation to foreign delegates, eminent foreigners whom the Sections may desire to invite to read papers and take part in the discussion, to members of the medical staff of the United States Army, Navy and Marine-Hospital Service, and to the occasional visiting physicians from our possessions outside of the limits of the United States proper. It has been the custom in most of the Sections to invite medical men of distinction who are not members of the Association to read papers before the Sections. Some of these gentlemen have been even openly hostile to the Association, and yet year after year have had the courtesies of the Association extended to them. They have availed themselves of these privileges and advantages and yet not only privately, but sometimes publicly, have expressed their hostility to the Association.

It seems to me that the time has now come when this practice should cease. Membership in the Association is open to every American, and any one who does not choose to avail himself of the privileges and advantages of membership by joining the Association should be debarred from them.

During the present year I have sent a courteous circular letter to each person so invited by the various Sections, but not a member of the Association, enclosing a form of application and in-

cluding him to become a member of the Association. I am glad to say that a very large number have availed themselves of the opportunity of doing so. The Constitution prescribes that the members by invitation shall be invited by "the meeting after an introduction from and being vouched for by at least three of the members present or three of the absent permanent members;" and in the order of business, the third order is the "reception of members by invitation." No such formality, it seems to me, is desirable. The extending of such an invitation to distinguished foreigners and others that I have suggested may well be left in the hands of the Sections, with the exception, it might be, occasionally of persons of unusual distinction.

Section on Pathology.—One of the important features of the American Medical Association is to promote the scientific side of medicine. It has seemed to me that the Association was not fulfilling its duty to scientific medicine in one important particular. There is scarcely a more important branch of modern medicine than pathology and bacteriology, and yet no section for the consideration of these subjects is provided. Although it was not authorized by the Association, I had such confidence in your intelligent and hearty co-operation that I ventured to ask a number of gentlemen to act as a provisional or unofficial committee to organize a Section of Pathology and Bacteriology, under the chairmanship of Dr. Ludvig Hektoen, of Chicago. These gentlemen have ably performed their task and they have presented a most attractive program. You will be asked to officially authorize the formation of such a Section, and I can not doubt what your action will be.

In connection with this, I also appointed a provisional or unofficial committee on a pathologic exhibit, in charge of a committee, of which Dr. Joseph Stokes, Moorestown, N. J., is the chairman. Dr. Frank B. Wyman, Indianapolis, Ind., has acted as secretary of both committees. I but ask you to visit the adjoining exhibit to be convinced of how faithfully and intelligently this committee has performed its task. They communicated with a large number of medical schools, museums, and individuals and have met with a most hearty response from all sides. They did not deem it wise that the exhibit should be either by States or by institutions, lest there should be aroused a rivalry, which would in some sense smack of egotism and lead to future disaster; but asked all to subordinate their individual and institutional interests to the broad general interests of science.

The Annual Exhibit.—The management of the annual exhibit is a matter of considerable importance to the Association. The exhibit is an important financial aid to the local committee which has charge of the meeting of the Association.

So far as I know there are no rules governing the charges, the classes of exhibits, or rather regulations by which this committee may be guided.

Each new committee is a law unto itself. It has seemed to me that if there could be a permanent committee on the annual exhibit, this would be of great advantage, especially if the committee were made up, in part at least, of those who had had experience with former exhibits. It would seem to be desirable that each year the chairman or some other member of the committee on the last exhibit should be added to the committee to replace one of the earlier members, who would retire. I recommend, therefore, that such a committee, to have charge of the exhibit at the annual meeting, be appointed this year, this committee shall have power to add to its numbers and nominate a chairman who shall reside in the place at which the succeeding meeting is to be held, and as many other local members of the committee as may be deemed necessary to carry on the work. The general committee could formulate general rules governing the exhibit and the local committee could carry out the details.

The Sections.—The work of the Sections has been, heretofore, in many respects admirably done. The tendency to correlate the papers which are presented under certain specific heads, and to select one or more important topics for consideration, inviting a few distinguished speakers to open the debate, which is thus thrown open to all, has been marked in the last few years. The advantages of such a source are so obvious that I trust the chairmen, secretaries and executive committees of the various Sections will hereafter strive for even more important debates and more important results than have been thus far achieved. Room should certainly be reserved for a certain number of volunteer papers, but to allow the major part of the time of the Sections to be taken up by a mass of heterogeneous papers on unrelated topics would be a great misfortune.

The policy of *The Journal*, also, in connection with the various papers read before the Sections is an important one. Papers vary greatly in their merit and importance, and it would seem to me that to the trustees and the editor of *The Journal* should be confided the entire responsibility of selecting the more important papers for publication in full, and of presenting the less important in longer or shorter abstracts. The example of the *British Medical Journal* may well guide us in this matter.

I ventured to correspond with the chairmen and secretaries of the various Sections as to the hour of the Section dinners. Very frequently this has been fixed at nine o'clock, an hour which was too late for the usual dinner and too early for a second one. Moreover, when the dinners are fixed at so late an hour, if they are to be followed by after-dinner speeches the hour at which the Sections can break up and seek a much-needed rest is so late that it interferes seriously with the work of the succeeding day. Almost without exception, the officers of the Sections preferred the usual dinner hour, about seven o'clock, both for material and intellectual reasons. It is often difficult to arrange this matter with the hotels at

which the dinners are usually given, but the Association, I think, might insist, as but a single evening is occupied by these dinners, that for the one occasion the hotels who profit so largely by the meeting should accommodate the Association in this matter.

Committee on the Thirteenth International Medical Congress.—Early last autumn Prof. William Osler, who had been requested to organize the American Committee on the coming International Congress, invited the President of the American Medical Association, and the Presidents of the various associations of medical specialists to form a committee to assist in organizing the International Medical Congress which is to assemble on August 2d in Paris. This Committee, and especially its chairman and secretary, have done the work exceptionally well. Of course, there is need of money for printing, postage, and clerk hire. At a recent meeting in Washington, the various societies represented by their chairmen, were invited to contribute \$25 each toward the expenses, I recommend that an appropriation of \$50 be made from the funds of the American Medical Association toward the expenses of this committee.

Endowment of Medical Schools.—Turning, now, from the affairs of the Association, I wish to say a few words in reference to a subject of paramount importance which I am sure will appeal to the sympathies of all present, namely: the need for endowments for medical schools.

The tide of charity in the United States has reached a remarkable height. The *Chicago Tribune* publishes an annual list showing that in 1894 the charitable gifts and bequests in the United States amounted in round numbers to \$20,000,000; in 1895, to \$29,000,000; in 1896, to \$34,000,000; in 1897, to \$34,000,000; in 1898, to \$24,000,000; and in 1899, to the enormous sum of nearly \$80,000,000.

But a small portion of this charity, however, has been bestowed upon medical schools. It is mostly to colleges, theological schools, hospitals, museums, and libraries, that the principal amount has been given. The cause for this, I think, has been chiefly the vicious method in which all our medical schools were formerly conducted. They were practically joint-stock companies, organized for the benefit of the faculties. As Professor Bowditch has said, one might as well expect the public to endow a cotton-mill as to endow such a school. The day of these private enterprises is now, happily, nearly past. The respectable schools of medicine are now conducted by trustees, a body of men wholly apart from the faculties, who manage the affairs of the medical school just as they would those of a university, taking control of the income and expenditures of the school, placing the professors and other teachers upon salaries, and conducting the affairs of the institution on broad lines of educational progress. Partly as a result of the influence of the profession exerted through the Association, the courses of study at the medical schools of to-day, and, therefore, the

necessities of the student, are so wholly different from those of twenty-five years ago that it may be well termed a new era in medical education. As a consequence of the broadening and lengthening of the medical course of study, the cost of medical education has enormously increased. The public at large does not at all appreciate this changed condition, and even you, members of the profession itself who may have graduated many years since, scarcely appreciate to its full value the difference. As a consequence, the fees of the students, which can scarcely be raised beyond the present amount, are wholly inadequate for providing a proper medical education, and the medical school appeals, as does the college and the theological and the technical school, for wise and liberal endowments in order to provide this suitable education. "There is no branch of education," says President Eliot of Harvard, "which more needs endowment. Medical education is very expensive, because it has become, in the main, individual instruction. Large lectures and crowded clinics are seen to be of really very limited application, so that year by year the medical teaching becomes more and more costly."

What were the necessities of a medical school twenty-five years ago? Two lecture-rooms, in which seven professors talked, a dissecting-room, and, if possible, a clinic, which was occasionally, but rarely, in a college hospital. Practically the instruction which the student obtained, with the exception of dissecting, was limited to "book-knowledge" and "ear-knowledge." The student was not brought into contact with any patients or any concrete facts, observations, or experiments. He only listened to what his teachers said about them. Millions were given to hospitals in which the sick were treated, but only sixpences to medical schools, in which the men who are to care for their future patients were trained. "Spain," says Lyman Abbott, "in the late war had nineteenth-century guns and sixteenth-century men behind them. We know what came." Our splendidly-equipped hospitals are the nineteenth-century guns. Insufficiently trained doctors are the sixteenth-century men. The time has certainly come when the "men behind the guns" must equal in efficiency the weapons with which they do the fighting.

To perform a tracheotomy and rescue a child suffering from diphtheria is a dramatic occurrence which appeals to every one. To conduct a long series of experiments in the laboratory, by means of which the cause of diphtheria shall be found and the necessity for a tracheotomy avoided, appeals only to the educated few; yet the service done by the operation is a service only to the one patient who may be rescued by the knife, while the other is a service to hundreds and thousands of patients who, for all time, will escape both the knife and the disease. Yet, such a series of experiments in preventive medicine brings no reward in money, a limited reward in fame, and only its largest reward in the consciousness of giving a great boon to humanity.

The era of the man who simply listened to what his teachers had to tell him and then went on his way, as a "rule of thumb" man, is, happily past. This is the era of the trained man and the trained woman, and training means opportunity provided by the community and time, labor and money given by the man.

Let us look for a moment at what a medical school now needs. It stands for two things: (1) "Thing knowledge," instead of "book-knowledge," and "ear-knowledge," teaching the facts of modern science, by scientific methods; that is to say, methods of precision. But (2) no medical school should be content simply with imparting the knowledge that exists. It should push back the boundaries of ignorance and, by research, add to existing knowledge.

In the accomplishment of the first duty of the medical school, there are required, first, didactic lectures. I am not one of those who believe that the day of the didactic lectures is past. "Never," said President Faunce, of Brown University, in his notable inaugural, "never shall we be able to do without the personality of the teacher, flaming with enthusiasm for knowledge, pressing up the heights himself and helping the student on."

In the 156 medical schools in this country there are, perhaps, over 1500 members in their faculties. In all of them are inspiring teachers flaming with enthusiasm, for a not inconsiderable proportion may properly be so described, and the influence of such enthusiastic teachers is felt by the entire class. One or two such men in every school make a good faculty. Besides the didactic lectures, a good working library and a reading or study room is a requisite. And it is a matter of no little encouragement that in the reports of the United States Commissioner of Education for 1898, 72 medical schools reported 151,433 volumes in their libraries.

The great difference between the modern method of teaching medicine and the older method consists in *laboratory instruction and clinical instruction*, both of which must be individual. Laboratories are very costly. They require buildings, equipment, and assistants. The number of laboratories required in the present day in a fully equipped medical school is astonishing. First, the dissecting-room—the anatomical laboratory—and along with this a laboratory of histology, and another which may be combined with it, a laboratory of embryology. Next, a physiological laboratory, in which each student will not become an accomplished physiologist, but will become familiar with physiological methods and be trained in exact and careful observation; a laboratory of chemistry and, combined with it, especially, a laboratory of physiological chemistry; in the department of materia medica, a laboratory of pharmacy, where the student will not only become a good pharmacist, but will learn the essentials of pharmacy so that he will not make, at least, gross mistakes, which, otherwise, would constantly occur. Still more important is a laboratory of pharmacology, in which he will learn the action of

drugs and be prepared rightly to use them. In obstetrics, a laboratory of practical obstetrics and obstetric operations is essential. In surgery, he needs a laboratory in which he shall be taught all the ordinary surgical operations. In pathology, he needs a laboratory of morbid anatomy, a laboratory of bacteriology, of hygiene. The mere statement of this catalogue of thirteen laboratories will enforce the fact that an enormous expense not only for the installation, but also for the running expenses, will be required. To show what one university abroad does, Professor Welch has stated¹ that the Prussian government expends, outside of the salaries of professors in the University of Berlin alone, over \$50,000 annually. What American medical school can show anything approaching an endowment which will provide such a sum?

And what has not the laboratory done for us within the last few years. It has discovered the cause of tuberculosis, tetanus, suppurative, cholera, diphtheria, bubonic plague, typhoid fever, erysipelas, pneumonia, glanders, and a host of other diseases; it has shown us how to avoid all danger from trichina so that our entire commerce in hog-products is conditioned upon the laboratory; it has shown us how to banish suppuration, erysipelas, tetanus, and pyemia from our hospitals and reduce our death-rates after operation from 50 or 33 per cent. to 10 per cent., 5 per cent., 1 per cent., and often even fractions of 1 per cent.; it has given us a really scientific hygiene in which we no longer guess but know; it has shown us the rôle of the mosquito in malaria, of the rat in bubonic plague, of the fly in typhoid fever; it has given us the power to say to diphtheria "thus far shalt thou go and no farther;" it will give us the power to utter a paean of victory over typhoid, cholera, bubonic plague, tuberculosis, yellow fever, cancer, and other such implacable enemies of the human race;—and yet there are those who would stay this God-given hand of help!

And the laboratory has had not only its devotees but its heroes. Listen to the story of but one. Dr. Franz Müller, of Vienna, was one of those who in his investigations of the bubonic plague in 1897 contracted the dreaded disease from the bacilli in his culture-tubes. When he became certain that he was infected he immediately locked himself in an isolated room and posted a message on the window pane, reading thus: "I am suffering from plague. Please do not send a doctor to me as, in any event, my end will come in four or five days." A number of his associates were anxious to attend him, but he refused to admit them and died alone, within the time he predicted. He wrote a farewell letter to his parents, placed it against the window, so it could be copied from the outside, and then burned the original with his own hands, fearful lest it might be preserved and carry the mysterious germ. Can you find me on any page of history a finer example of self-sacrificing altruism? Was ever a Victoria Cross more bravely won?

But the establishment of laboratories, with their attendant expenses, is not the only improvement in our medical curriculum. Every well-conducted medical school requires a large hospital in connection with it. Here must be installed again a fourteenth laboratory of clinical medicine in which all the excretions of the body will be examined, tumors studied, cultures and blood-counts made, or else the patients in the hospital, from the modern point of view, are neglected. It is not too much to say that a patient requiring such examinations, be he the poorest of the poor, has his case more scientifically studied, more exactly measured, more precisely treated than most rich patients in sumptuous homes.

Again, the individual instruction to which President Eliot referred is now carried out in all of our best medical school hospitals by the establishment of small ward-classes, by whom or before whom the patients are examined, prescribed for and operated upon by the professor or instructor, each student bearing a part; and so, by having his investigations directed, his powers of observation cultivated, his mistakes pointed out, his merits applauded, the student graduates from the medical school equipped as none of us, alas, ever had the opportunity to be. All of these laboratory and ward classes imply an enormous increase in the number of assistants, young men striving not only to perfect themselves, but by teaching, to forge to the front so that the best men will win the struggle for preferment.

Again, the course of study has been prolonged from two years, as it was until 20 to 25 years ago, to four years, and in addition the terms have also been lengthened. When I was a student the course of study consisted of two sessions of about 19 weeks each, or 38 weeks in all. Now the course consists, as a rule, of four sessions of 32 weeks each, or a total of 128 weeks, an increase of 90 weeks, nearly 3½ times as much as 25 years ago. In 1885, 103 schools had courses of two years, and 5 school courses of three years. In 1899, 2 schools had courses of two years, 10 of three years, and 141 of four years.¹

It can be easily seen that from this additional time required another source of expense has arisen besides the increased number of assistants. The time given to teaching by members of the faculty, as a rule, has been more than tripled, as compared with twenty-five years ago. In addition to this, professors in charge of laboratories must practically give their whole time to the work and are precluded, therefore, from any income from practice. These men must receive salaries sufficient for them to live on.

Surely this statement of the difference between the education given twenty-five years ago, which required but little expenditure of money and resulted in considerable incomes, and the modern

education given twenty-five years ago, which required but little expenditure of money and resulted in considerable incomes, and the modern

¹ Higher Medical Education and the Need for Its Endowment. Medical News, July 21, 1899.

¹ Monographs on Education in the U. S.; No. 10, Provisional Education, p. 11. James Russell Parsons, Jr., Dept. of Education for the U. S. Commissioner to the Paris Exposition of 1900.

methods of education in the laboratory and the hospital, as well as the lecture-room, which require enormous expenses, is an ample reason for large endowments.

But, the function of the medical school, as I have said, should not be limited merely to the imparting of existing knowledge. No school is worthy of the name that does not provide for greater or less research work by which substantial additions to our knowledge may be made and the facilities and the results of the healing art made more efficient for the welfare of mankind. Twenty-five years ago there were practically few young men who were fitted for research work, especially laboratory work. Now every well-equipped school has attached to it, in one way or another, a score or more of young men who are eager for work, longing for the opportunities for usefulness and distinction if they can only obtain a bare living. When in my own school I look around me and see these young men thirsting for opportunities for usefulness and distinction, I am often heartsick at our want of facilities for this purpose, and I long with an intense longing for some wise and munificent friend of humanity who will endow post-graduate scholarships, fellowships and laboratories for just such an end. Our hospitals do a magnificent work in charity, helping the sick and the forlorn, the weak and the suffering in a way which appeals to the charitable instincts of our fellow-countrymen, and to this appeal they have responded most generously. *But I venture to say that the medical school which trained a Lister, a Pasteur, a Koch, has done more for humanity than all the hospitals of this country combined.* The modest laboratory at Würzburg consisted chiefly of a Rhumkorff coil, and a Crookes' tube—and Röntgen. Other Röntgens and Listers we have among us if we but knew it. These are the men who are the world's real illustrious heroes.

It is especially in these days that in America we need such researches, for our tropical possessions have brought us face to face with new problems which we can only justly meet by the most careful investigations. It is to our credit that several of our medical colleges have already established schools of tropical medicine, which show that the profession, as well as the public, are rising to the level of our responsibilities.

It is also a cheerful sign of the times that at Harvard a school of comparative medicine has been established, which will lead to other similar schools in connection with our medical colleges, for the broad study of disease both in man and in the lower animals. All such knowledge should be correlated, and we may well learn from the diseases of animals how to care for man, as thus far we have learned chiefly from the diseases of man how to care for animals. The endowment of this school with the modest sum of \$100,000 is an omen of future good. So too, the somewhat similar school at Buffalo bids fair to add immensely to our knowledge and therefore to our ability to heal.

What now has the American public done for the medical school? Let us contrast it with the endowments in theology. Our academic institutions have such an enormous sum-total of endowments that I do not even consider these. Let us, however, compare theology and medicine, remembering that theology is almost wholly a literary study, dealing not with the facts of Nature, requiring no laboratories and no large corps of assistants and therefore conducted at a minimum of cost. In 1894¹ 84 theological schools reported endowments of \$18,000,000, and 71 schools do not report this item; 19 out of 151 medical schools report endowments of \$1,906,072. Five theological schools have endowments of from \$850,000 to \$1,369,000 each. Yet in 1899 there were only 8000 students of theology for whom this enormous endowment was provided, as against 24,000 students of medicine. Each theological student had the income of an endowment of \$2250 provided for his aid, each medical student the income from \$83. As against 171 endowed chairs of theology there are only 5 in medicine.

I do not grudge a dollar to the theologian, but I plead for his medical brother, that, with a vastly more expensive education he shall have a reasonable provision made for his training. I have already indicated to some extent the direction which these endowments of medical schools should take. They may be classed in three categories: (1) The endowment of professorships. By doing this the salary of the professor would be made available for the other wants of the school. The endowment may well take the form of a memorial, either of the generous donor, or, still better, of some distinguished former occupant of such chair whose name would always add luster to it. (2) The endowment of the laboratories which, as I have indicated, are so costly, both in their installation and in their yearly expenses. (3) The endowment of post-graduate scholarships and research fellowships, these being intended especially for those who will devote their time to original research. Students can not take much time for original research; their regular studies will absorb all their energies. Research must be done chiefly by young graduates under the direction of stimulating and energetic members of the faculty.

It is not, I trust, too much to hope, if not now, that in the near future the American Medical Association will set a fruitful example by giving each year "Scientific Grants in Aid of Research." The first object of the Association must be, necessarily, to place itself on a strong financial basis. It should own its own building, its printing and publishing plant, and, as soon as possible, should have a reserve fund of considerable proportions. Nothing conduces to the stability and conservativeness of any institution like a good bank balance. The British Medical Association has to-day an excess of assets over liabilities of nearly \$380,000, chiefly invested in its building at 429 Strand, London. The American Medical Association

¹ U. S. Education Report.

tion has made a fair start with a surplus of over \$27,000 last January, and, with its large, and, let us hope, rapidly increasing membership, it will before long assume a rank second only to the British Medical Association. Last year¹ the Scientific Grants Committee allotted £741, or somewhat more than \$3500, for research work, distributed to three research scholarships, the holders of which were paid \$750 each a year, and thirty-three grants in aid of research work, varying in amounts from \$25 to \$100. Among those to whom grants were made occur the well-known names of Beevor, Vaughan, Harley, Kanthack, Luff, Manson, Noel Payton, and Risien Russell. I should hope that the American Medical Association might even now begin by a modest appropriation, say of \$500 a year, which should be allotted by the trustees, or by a special committee on scientific grants, after a careful investigation of the merits and the character of the person to whom such grants were made. No grant should exceed \$100, or possibly even, at first, \$50 in amount. The results of such grants would be not only absolute additions to our knowledge, but the cultivation of a scientific spirit which would permeate the whole profession and elevate its objects and aims.

In pleading for these endowments of medical schools, it is but a plea for a return to the profession of a tithe of what they have given. Two years ago I carefully investigated the value of the services rendered to the poor in the city of Philadelphia by the medical staff of the Jefferson Medical College Hospital alone, and I found that 129 medical men were then attached to the hospital, and their services, calculated on a very modern basis of the ordinary fees, I valued at over \$500,000. To a profession which gives so freely of that which is most difficult to give, its own life-blood, surely the public for its own protection may give reasonable endowments to its medical schools. It will be returned to the community tenfold in better educated, better trained and more successful doctors. More devoted, self-sacrificing men and women they never can have.

GASTRIC HEMORRHAGE.*

By WILLIAM L. RODMAN, M.D.,
OF PHILADELPHIA.

PERMIT me in the first place to express my profoundest gratitude to the Association for the distinguished honor conferred in placing the surgical oration for 1900 in my hands. It is with more than diffidence that I approach so great a responsibility, being keenly alive to my own shortcomings, and having for the nonce a quickened memory of the brilliant addresses made on former occasions by many of my illustrious predecessors.

Gastric hemorrhage of whatever nature was, until recently, looked upon as strictly a medical

affection, and was treated on the same general principles as underlie the treatment of many other internal hemorrhages. This is still true of many, indeed, most cases of gastrorrhagia, but as I shall endeavor to show, is not the case with others which are treated by a combination of medical and surgical means and others still which should be met by prompt operative procedure.

Our purpose will be best subserved by enumerating the different varieties of gastrorrhagias, showing how they are to be diagnosticated, and giving the treatment to be pursued in the more important varieties. Hemorrhage from the stomach may result from ulcer of the stomach, duodenal ulcer, gastric carcinoma, cirrhosis of the liver, vicarious menstruation, post-operative hematemesis, purpura hemorrhagica, miliary aneurisms, aneurisms of the aorta and other vessels, leucemia, typhoid, yellow and other infectious fevers, valvular disease of the heart, and various kinds of traumatism.

Gastric ulcer is the most common disease of the stomach producing hemorrhage—occurring in 5 per cent. of the entire population, according to Ewald¹ and others high in authority. Hematemesis occurs in at least 50 per cent. of all cases of gastric ulcer, and many authorities estimate it as present in 80 per cent. It is, too, fatal in 8 per cent. of the cases in which it occurs, according to the conservative estimate of Leube,² and we can not question that it is indirectly fatal in a much greater number of cases by anemia and its remote consequences. Many authorities who might be quoted place both the frequency and mortality of hemorrhage higher than Leube does, and very few as low. Therefore, its prompt detection and proper treatment are of the greatest importance.

The recognition of gastric hemorrhage resulting from ulcer usually is readily made on account of the previous diagnosis in the case; but if the patient is seen at or subsequent to the hemorrhage for the first time, its association with the other classic symptoms of ulcer, particularly pain and vomiting after eating, leave little room for doubt. While there will be pain, vomiting, and gastrorrhagia in carcinoma of the stomach, the differences furnished by the two diseases are so marked that doubtful or border-line cases will be rare. The pain of ulcer is often relieved at once by emesis if it empties the stomach. This is not the case with pain and vomiting of carcinoma. Bleeding in carcinoma is rarely so free as in ulcer; the amount of blood lost being more frequent, in small quantities, and of the characteristic coffee-grounds appearance. It does not resemble pure blood, as it does in ulcer, even though mixed with food. The presence of hydrochloric acid—perhaps an excess of it, or hyperchlorhydria—in the ejected matter is as characteristic of ulcer as its presence and the presence of lactic acid are of carcinoma. Ulcer is more frequent in females under forty, whereas carcinoma occurs more commonly in men past middle life.

If an examination of the patient is allowable, the presence of a palpable tumor will be more

¹ Brit. Med. Jour., 1899, ii, p. 319.

*Abstract of Oration on Surgery delivered at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 2-8, 1900.

often encountered in carcinoma than in benign ulcer, but I would emphasize the fact that a decided tumor may, and did, exist in quite a number of the forty benign ulcers thus far excised.

Treatment.—Formerly the treatment of hemorrhage from gastric ulcer was uniformly by ice, astringents, and opium, combined, of course, with rest. This should properly be the treatment still for the first hemorrhage in all cases; for the second possibly; but not for subsequent ones, for recurring hemorrhage, like appendicitis, will sooner or later prove fatal, and should, like that affection, be treated radically; and to carry the parallelism further, the best time to operate is between attacks. With two hemorrhages coming close together we may assume that, as in appendicitis, there will be a third attack, and if anything is to be attempted surgically it should be done when the patient is in fairly good condition, and not in the collapse of hemorrhage.

Before taking up operative procedures it might be well to refer to the treatment of gastrorrhagia by copious enemata of hot water, as advised and practised with such happy effect seemingly by Tripier.⁴ In several cases which have resisted all the usual medicinal and dietetic treatment, Tripier secured prompt and abiding results by hot enemata repeated twice or thrice daily. The water should be injected at a temperature of 112° to 120° F. There can be no doubt, he says, that the hemorrhage came from the stomach, duodenum, and points high up in the alimentary tract. Hot water acts reflexly.

Tripier has also found that hot enemata promptly check intestinal hemorrhage in typhoid fever, as it will bleeding from the rectum, sigmoid, and large bowel.

Plunging the hands in hot water will at times quickly arrest bleeding at the nose, as will ice applied to the head. This, surely, must be reflex. Another and good reason for using hot water per rectum in the manner advised by Tripier is, that if nothing more is done shock is combated in the best possible way, as it is easy to add salt to the water in proper proportion to make normal salt solution. Hot water should also be taken in small quantities by the stomach. It is my belief that it will be less likely to excite vomiting and more certain in its hemostatic effects than ice. If the bleeding is capillary or the open arterioles of very small size, prompt hemostasis may result; whereas, if an artery or vein of any size has been opened we may expect much less from any treatment which depends for its success on the formation of a firm clot in the mouth of the bleeding vessel, than we usually can in external hemorrhage.

In hemorrhage the result of disease, however, we have very generally a lateral opening made into the caliber of the blood-vessel, and the ability of the latter to contract and retract within its sheath is no greater, but actually less, than that of a vessel incompletely cut across. Occasionally, it is true, ulcerative action will as completely divide a blood-vessel as if it were done by a knife, but such cases are exceptional, as will be shown

by a careful study of fifty-five fatal cases of gastric and duodenal hemorrhage collected and reported by M. Savariaud⁵ in his very complete thesis.

Of fifty-five autopsies collected from various sources, and reported by Savariaud—none was operated upon—there were: Ulcerations of the splenic artery, 17 cases; ulcerations of the coronary artery, 6; ulcerations of the pancreaticoduodenal, 7; ulcerations of the gastric arterioles, 10; branches of the coronary vein, 2; other veins, 2; vessel not determined, 2; no vascular orifice visible, 4; vessel not mentioned, 4.

Hematemesis frequently occurs as the result of duodenal ulcerations, and as it is at times impossible to differentiate between gastric and duodenal hemorrhage, we have included the seven cases of duodenal ulcer. Furthermore, gastric and duodenal ulcerations frequently coexist and the treatment of both is essentially the same. The splenic artery and vein have been opened by the same ulcer, as occurred in the case of Gaillard.⁶

Contrary to what might with reason be expected, there is no constant relation between the size of the vessel and the amount of blood, or the rapidity with which it is lost. It is impossible, therefore, to diagnosticate with any degree of certainty the source of the hemorrhage, and an opinion at best is only a guess based on probabilities anatomic and pathologic. He who said, "the end of all philosophy is a learned doubt," must have been a medical man thinking of gastric hemorrhage.

The subjoined table is also from Savariaud.

Vessel	Cases	Sudden Death	Rapid Death	Survived
Heart.....	4	1	1	2 (3 days)
Aorta.....	2	1	1	1 (10 days)
Hepatic.....	2	1	1	1 (10 days)
Splenic.....	17	3	7	7 (2 to 8 days)
Coronary.....	6	1	3	2
Pancreaticoduodenal.....	6	1	3	2 (8 to 15 days)
Arterioles.....	10	1	1	8 (4 to 15 days)
Small Veins.....	4	1	1	2 (7 to 11 days)
Invisible Veins.....	3	2	1	1 (21 days)

It will also be seen from this table, based on autopsies where careful examinations were made, that death may be sudden in capillary hemorrhage, or delayed ten days when there is an opening into the aorta as large as a haricot bean—Grunfeld's case.

This uncertainty of diagnosis is a strong argument in favor of surgical intervention before it is too late to be of use. I would emphasize the fact as shown by the above table, which is based on accurate post-mortem examinations, that large and rapidly fatal hemorrhages may occur from capillaries.

Having exhausted all of the ordinary medical means for arresting hemorrhage should such cases be treated as external hemorrhage, viz., the bleeding vessels cut down upon and ligated? There is a sufficient number of cases on record to justify the statement that better results will be secured by judicious interference than by a policy of inaction hitherto invariably followed. By this I would not be understood as advocating the opposite plan of interference in every case—far

from it. Up to a certain point there is a substantial agreement between physicians and surgeons, and I may say here that the idea of arresting hemorrhage from gastric ulcer by surgical means occurred to a physician and a surgeon at the same time. In all cases of small but frequent hemorrhages, which slowly but almost surely destroy the patient, recourse should be had to timely operation. If there is at the same time gastrectasis, the indication for operation is absolute, as dilatation stretches the ulcer, prevents healing and favors bleeding.

The results, too, of operations for chronic hemorrhage have been more than encouraging, and should, without question, lead to earlier and more frequent surgical intervention. There have been thirty-one operations for frequently recurring, or what might be called chronic, hemorrhage, with six deaths, or a mortality of 19.3 per cent. This is, under the circumstances, an excellent showing when it is remembered that it represents but little more than the average mortality given in a large number of operations on the stomach for non-hemorrhagic ulcers. Mr. Robson⁷ reports 188 operations for gastric ulcer—non-hemorrhagic and non-perforating—with a mortality of 16.4 per cent., which is about the same conclusion reached by Heydenriech,⁸ Tricome⁹ and others who have written on the subject. He (Robson) later on gives the mortality of operations for chronic hemorrhage as 10.5 per cent. Manifestly gastro-enterostomy, pyloroplasty, or other operations on the stomach should not give a better prognosis on account of the presence of hemorrhage as a symptom. The good showing now made for recurring hemorrhage will be still better when physicians generally recognize that if delayed operations are justifiable, early ones are better, and should, therefore, be encouraged at a time when the chances of success are correspondingly brighter.

Operations for acute hemorrhage in general do not so imperatively call for surgical intervention, but when this is said, it is saying nothing more than is true of external hemorrhage. In the present state of our knowledge, we can not say that operation should ever be done during the first hemorrhage or the ensuing shock. Likewise, if seen after the hemorrhage, when the patient is successfully rallying from shock, a policy of non-intervention is not only permissible, but best.

I am thoroughly convinced, from a careful study of all reported operated cases up to date, that none were operated on too early, but many too late. It is certainly the duty of the physician to summon surgical aid as soon as the second hemorrhage begins, if he has not already done so, that everything may be in readiness to seize upon a propitious time for interference before a third attack.

It is easy to believe that several cases in my tables were lost by delaying operation until after the third and fourth hemorrhage. *Per contra*, there have been quite a number of successful results after the second and third hemorrhage,

operation having been done in a condition of extreme anemia in all of them, as in the cases of Roux, Robson, Caxin, Andrews, and two of Armstrong's cases. There have been thirty-two operations for acute hemorrhage with thirteen deaths or 40.6 per cent. mortality, a much better showing than was made by Mayo Robson, who reported a smaller number of cases, and included also among them cases of vicarious menstruation and post-operative hematemesis, neither of which has any direct etiologic or other connection with gastric ulcer.

Of the dozen methods practised, the three best are pylorotomy or partial gastrectomy, according to the site of the ulcer, gastro-enterostomy, and ligature *en masse* of the gastric mucosa. The first is ideal surgery, preventing possible perforation and malignant degeneration; the second is practical and oftentimes the best surgery, stopping hemorrhage and favoring cicatrization of the ulcer by putting the stomach at rest; while the third is frequently the most desirable way to end an exploratory gastrotomy when the site of the bleeding vessel was unknown until the stomach was opened. Each method has given good results, but for many reasons the second has been preferred in a majority of instances, and of the many ways of performing gastro-enterostomy the posterior or Von Hacker's method with the Murphy button has been, and should be, generally chosen. Resection, if practicable, is best, but gastro-enterostomy would not only arrest the bleeding, but usually delay the inevitable end, and bring about a decided amelioration of all the distressing symptoms. Indicated as it often is in advanced carcinoma without hemorrhage, the presence of the latter as a symptom should be an additional reason for surgical intervention.

Cirrhosis.—Hemorrhage into the stomach is a frequent symptom in cirrhosis of the liver, and death resulting therefrom can not be considered as rare. Preble,¹⁰ of Chicago, has recently reported 60 cases of fatal hemorrhage, 3 in his own practice, and 1 in that of a colleague and 56 collected from literature. The diagnosis in all was verified by autopsy. After a careful analysis of these, a full history of each being given, he draws some interesting and striking conclusions: "(1) Fatal gastro-intestinal hemorrhage is an infrequent but not rare complication of cirrhosis of the liver. (2) In a great majority of the cases the cirrhosis is atrophic, but it may be hypertrophic. (3) In one-third of the cases the first hemorrhage is fatal; in the other two-thirds the hemorrhages continue at intervals of over a period varying from a few months to several years, the maximum given being eleven years. (4) In one-third of the cases the diagnosis can be made at or before the time of the first hemorrhage. In the other cases the diagnosis can not be made at all or only after a few months or years, during which time other symptoms of cirrhosis have developed. (5) Esophageal varices are present in 80 per cent. of the cases and in more than one-half of the 80 per cent. the varices

show microscopical ruptures, and it is probable that many other ruptures would be found if the varices were tested by injection of air or fluid. (6) Fatal hemorrhages occur in cases which show no esophageal varices, and they are probably due to the simultaneous rupture of many capillaries of the gastro-intestinal mucous membrane. (7) The hemorrhages in this class of cases are usually preceded by other symptoms of cirrhosis, but the first symptom may be a fatal hemorrhage. (8) In 6 per cent. of the cases which show esophageal varices was the cirrhosis typical, i. e., showed ascites, enlarged spleen, and subcutaneous varices."

Treatment.—It has been suggested that as esophageal varices are the cause of a large per cent. of the gastrorrhagias complicating cirrhosis, pressure should be made on the ruptured varix or varices by introducing a rubber bag into the esophagus and distending it with water or air. This suggestion, so far as I know, has not been carried out. The objections that one can urge against it are manifold: (1) It is questionable whether pressure can be sufficiently protracted in this way to be of benefit. (2) In only 6 per cent. of the cases showing esophageal varices was the cirrhosis typical, and therefore easily diagnosed. It is certainly unsafe to formulate a treatment which at best has only a chance to reach a comparatively small number of cases. (3) The esophageal veins are part of the systemic, while those returning blood from the gastric mucous membrane are of the portal circulation.

There can be no reasonable doubt, however, that operations for gastric hemorrhage in cirrhosis have a less promising future than the same procedures in bleeding ulcer; for in the former there is in addition that general hemorrhagic tendency that makes bleeding from any situation most difficult to arrest. No operation has as yet, so far as I know, been deliberately performed where the diagnosis of cirrhosis had been made. Several of the cases reported and operated on as hemorrhagic ulcers may have been—probably were—instances of cirrhosis.

Vicarious Menstruation.—There has been a more or less general sentiment, if not positive conviction, on the part of a majority of the profession, that vicarious menstruation may manifest itself in the way of hematemeses. Such was, too, until recently the general teaching, and there are not wanting those who still believe in the possibility of such an occurrence. If it does happen one would naturally think that it would be in young women whose ovaries and tubes have been removed, or in women submitted to hysterectomy, the appendages being left, and who can not therefore, menstruate in the natural way. I have written to fifty prominent gynecologists and surgeons to learn if they had seen, and if so how frequently, instances of vicarious menstruation showing itself by hematemeses following removal of the appendages, uterus, or both. Nearly all have answered, and it is a significant fact that only two have reported—each a single case—affirmatively:

Yet these operations are very common, one of them having been for many years probably the most frequently practised surgical procedure. Many of the writers have expressed a positive conviction that vicarious menstruation does not occur. It would seem, therefore, that what has hitherto been a vague impression with most of us is not corroborated by a careful examination of a large number of cases, where it should if it ever occurs.

Post-Operative Hematemesis.—I can not find, in any of the text-books on surgery at my command, reference to post-operative hematemesis. It must therefore be rare.

Mayo Robson,¹² in his Hunterian lectures, states that he has encountered it in seven cases of his own, two being fatal, and refers to a similar experience of Eiselberg, who reported to the surgical society in Berlin the details of six cases. It is significant that nearly all of those reported by Robson and Eiselberg were instances of operations on the intestines, omentum, and structures adjacent to the stomach. The anesthetic could not have been responsible for the vomiting of blood, for in one of Mr. Robson's cases cocaine was used, and a cholecystotomy for carcinoma of the bile-ducts completed in fifteen minutes. In several others there was no vomiting after the operation. Robson states that in six of the cases the omentum was ligated, and in another it was probably contused. He also says that "in an experiment on an animal multiple hemorrhages into the stomach followed twisting of the omentum."

I have, with the assistance of Drs. Burns and Woody, experimented on four dogs, endeavoring to cause hemorrhage into the stomach, if possible, by rapid and severe traumatism not applied to the stomach itself but without success.

Of the fifty surgeons written to, only nine have seen post-operative hematemesis. Three operators, Johnston of Richmond, Parish of Philadelphia, and Wathen of Louisville have had one case of gastrorrhagia following hysterectomy. All occurred within a week after operation, one being fatal. Clarke and Noble of Philadelphia have each seen fatal hemorrhage from duodenal ulcers after operation. The former does not give the exact nature of the operation, but it was intrapelvic. Noble states that his patient was a woman about 60, operated on for ventral hernia. Hemorrhage that was quickly fatal occurred on the tenth day after operation. Autopsy showed a marked duodenal ulceration. Noble and Wathen have each had a fatal case of hemorrhage after nephrorraphy. Noble operated on both kidneys in a young woman. Death occurred on the twelfth day, as a result of hemorrhage from the stomach and bowels. No autopsy was allowed. Wathen's patient was a highly neurotic young woman. She began vomiting blood more than a week after operation, and died two or three days later. There was no autopsy. Johnston has also reported cases of hematemesis following operations for ovarian tumor with a twisted pedicle, suppurating ovarian cyst, strang-

ulated hernia, and extra-uterine pregnancy. The first three were fatal and accompanied with general peritonitis; the last recovered. Three others have seen post-operative hematemesis, but it followed operations on the stomach itself; these were apparently cases of secondary hemorrhage, and are, therefore, excluded. I have been particular to make inquiries as to the frequency of hematemesis after hernia operations, as Robson and Eiselsberg have both seen it. Of fifty surgeons written to only two have encountered it, and one of the cases was a strangulated hernia with general peritonitis. The other was the case operated on for ventral hernia, and who died from a demonstrated duodenal ulcer.

In more than a hundred herniotomies—strangulated and non-strangulated cases—I have never encountered it. The sum total of all the hernia operations done by the fifty surgeons to whom I have written must be many thousands, and yet but two cases of post-operative hematemesis are reported, and each has been satisfactorily explained, one patient dying of peritonitis following strangulated hernia, the other from a duodenal ulcer demonstrated by autopsy. All of the cases seen by Robson and Eiselsberg followed intra-abdominal operations, such also being the case with all post-operative hematemesis reported by American surgeons, excepting two cases where nephrorraphy had been done. In doing nephrorraphy the peritoneum may, in the first place, be incautiously opened by the most careful operator, and secondly, there is always a considerable amount of traumatism necessary to force the kidney into the lumbar incision. It is not, therefore, difficult to understand how a hematoma may easily be produced by the great abdominal pressure oftentimes necessary to bring the kidneys into view, and how, furthermore, this extravasation may occasionally cause sapremia, septicemia, or peritonitis according to circumstances. All septic conditions favor disintegration of the blood-corpuscles and predispose to hemorrhage from mucous surfaces. The gastric mucosa is particularly liable to congestion in conditions of sepsis, both on account of the marked tendency of the thin and more or less disintegrated blood to settle in the internal organs, and the vomiting and retching so frequently present.

We have in this a satisfactory explanation of the rare hematemesis following abdominal operations, and have shown that even violent traumatism to the omentum, intestines, spleen, pancreas and liver did not produce immediate hemorrhage into the stomach in any of the dogs experimented on, and it does not seem unreasonable to suppose that delayed hematemesis will usually depend on disintegration of the blood due to sepsis.

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CONCLUSIONS REACHED AFTER A STUDY OF TYPHOID FEVER AMONG THE AMERICAN SOLDIERS IN 1898.¹

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It is well known that typhoid fever prevailed extensively among American soldiers assembled at state and national encampments during the brief war between the United States and Spain in 1898. In August of that year a board consisting of Major Walter Reed, U. S. A., Major E. O. Shakespeare, U. S. V., and the writer, was appointed at the request of the Surgeon-General of the United States Army, for the purpose of ascertaining the causes of the existence and spread of typhoid fever in the national encampments, and of suggesting means of its abatement. In accordance with instructions, this board visited the national encampments and inspected most of the regiments. While doing this, we interviewed medical and line officers, and obtained as far as possible the sanitary and medical history of each regiment. After completing this tour of inspection, we spent about eighteen months in going over the medical records of these commands. In this work we have accumulated a vast amount of information, which we have embodied in our final report to the Surgeon-General. Since much of this information may be useful to the profession, and as the report is not likely to be published soon, I have concluded that I can not do better than present some of the more important results reached in this investigation, as follows:

1. *Every regiment in the United States service in 1898 developed typhoid fever.*—This is true of both volunteer and regular commands. I am aware of the fact that some regiments have claimed freedom from typhoid fever, and it is true that the sick reports of more than one command fail to show any evidence of this disease; but by carefully tracing the sick to hospitals, we have been able to find one or more cases of typhoid fever in every regiment. The claim is made by an assistant-surgeon of one of the Pennsylvania regiments that there was not a case of typhoid fever in his command, but the records of the Philadelphia hospitals show that certain cases sent from this regiment proved to be typhoid fever. It is true that this regiment, which was engaged in guarding powder-works in New Jersey and Delaware, had relatively few cases of typhoid fever, but it did not altogether escape this disease.

2. *More than 90 per cent. of the volunteer regiments developed typhoid fever within eight weeks after assembling in the state encampments.*—It is impossible to fix any exact date on which

¹ Abstract of Oration on State Medicine delivered before the Fifty-first annual meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

the several regiments assembled at their state encampments. However, as the first call for troops was issued April 20, 1898, it must follow that at the earliest all regiments assembled at state encampments during the last week of that month. Bearing this in mind, our report will show that the great majority of the volunteer regiments developed one or more cases of typhoid fever within eight weeks after assembling at the state encampment.

3. *Most, probably all, of the regular regiments developed typhoid fever within less than eight weeks after going into camp.*—When war with Spain was proclaimed, the total strength of the standing army of the United States was 27,000 officers and men. These troops were scattered at about 100 military garrisons. All of the soldiers were well housed, and their quarters were, from a sanitary standpoint, in good condition. At each garrison, the water-supply was above suspicion, and the disposal of waste was such as not to endanger the health or the life of the soldiers. There was no epidemic at any post, and the army was reasonably free from infectious diseases except those of venereal origin. The number of cases of typhoid fever among the 27,000 officers and men during the first four months of 1898 was distributed as follows: In January, 9 cases with 1 death; in February, 3 with 1 death; in March, 4 with no deaths; in April, 6 with 1 death. During the last week of April and the first week of May, 1898, the regular regiments were assembled in national encampments and placed under canvas.

4. *Typhoid fever not only appeared in every regiment in the service, but it became epidemic, both in the small encampments of not more than one regiment, and in the larger ones consisting of one or more corps.*—The statement has been made that the epidemics of typhoid fever in our national encampments in 1898 were due to crowding together large numbers of men. The Third North Carolina Volunteer Infantry, at its isolated post at Fort Macon, N. C., developed typhoid fever before it was sent to Knoxville, where it became a part of the Second Division of the First Army Corps.

When we reached Knoxville, Tenn., in our round of inspecting the troops, we were informed that the Fourth Tennessee was encamped near that place, where it had been since mobilization, and that it was wholly free from typhoid fever. A personal investigation showed the following facts: This regiment assembled June 28th, although it was not mustered into United States service until about the middle of July. On August 12th Ernest Martin, who had not been well for a week preceding this time, was admitted to the regimental hospital. On August 15th he was furloughed, and on September 11th he died at his home in Nashville, Tenn., of typhoid fever. From the date of this first case up to the time of our inspection (Sept. 14, 1898) there had been in this regiment not less than 11 well-marked cases of typhoid fever, although none had been so diagnosed by the regimental surgeon.

5. *Typhoid fever became epidemic in camps located in the Northern as well as in those located in the Southern States.*—Some medical officers have placed stress on the fact that Northern men were transferred to the Southern States in the summer time, and have attached considerable importance to the influence of non-acclimatization in the production of the epidemics of typhoid fever. In answer to this, we need only call attention to the fact that the Fifteenth Minnesota, Thirty-fifth Michigan and the Two Hundred and Third New York furnished large numbers of cases of typhoid fever, practically all of which developed before they crossed the Mason and Dixon line. There is nothing more certain than that the prevalence of typhoid fever among the troops in 1898 was not due to the geographic location.

6. *Typhoid fever is so widely distributed in this country that one or more cases are likely to appear in any regiment within eight weeks after assembling.*—We have no reliable data concerning the extent to which typhoid fever prevails in this country, but from the number of deaths due to this disease, we can fairly estimate the number of cases. Such estimations show that with this disease as prevalent as it is throughout the country, it is more than probable that in any organization of 1,300 men of military age, taken from private life and held together for two months, one or more cases will develop.

7. *Typhoid fever usually appears in military expeditions within eight weeks after assembly.*—The histories of the Galeaka-Gaika war of South Africa, the Zulu war, the Afghan, Egyptian and Nile campaigns all confirm this statement. Similar experiences are recorded in the history of mining camps in various parts of the world.

8. *The miasmatic theory of the origin of typhoid fever is not supported by our investigations.*—There are still some who believe that typhoid fever is due to a poison or miasma given off from the earth in gaseous form. I would not mention this obsolete theory were it not for the fact that while inspecting the camps we found intelligent medical officers who believed that some intangible local condition inherent in the place was an important factor in the production of the epidemic. There is apparently in man a tendency to believe in the evil genius of locality. He is prone to attribute many of his misfortunes to indefinable conditions surrounding the place in which he has suffered. As I have stated, no fact in our investigations has been brought out more prominently than the demonstration that locality was not responsible for the epidemics.

9. *The pathogenic theory of the origin of typhoid fever is not supported by our investigations.*—Murchison proposed this theory of the origin of typhoid fever. This author makes the following statement: "Typhoid fever may be generated independently of a previous case by fermentation of fecal and perhaps other forms of organic matter." Translated into terms of modern medicine, this theory is founded on the

belief that the colon germ may undergo a ripening process by means of which its virulence is so increased and altered that it may be converted into the typhoid bacillus, or at least may become the active agent in the causation of typhoid fever. Many French, English and American army medical officers believe that typhoid fever may originate in this way. Rodet and Roux, of the French army, have stated their belief that outside of the body the colon bacillus acquires "typhigenic" properties. Surgeon-Captain Davies has expressed his belief in this theory, and some of the medical officers in the American army have also given it their adherence.

I believe that the results of our investigations controvert this theory conclusively. In the first place, we have been able to show that the specific poison of typhoid fever was introduced into every one of our national encampments, and with the disease as widespread as it is in this country, I believe that we have good reasons for the claim that one or more men already specifically infected with typhoid fever enlisted in nearly every command. There is, therefore, no necessity of resorting to the theory that the colon bacillus may be converted into the typhoid germ. Moreover, all the known facts of experimental bacteriology are at variance with this theory. So far as the supposition that simple diarrhea may develop into typhoid fever is concerned, I may state that in my opinion our investigations conclusively prove that this is not true.

10. *Our investigations confirmed the doctrine of the specific origin of typhoid fever.*—As has already been stated, we have been able to trace the introduction of typhoid fever into every one of our national encampments and into the majority of the regiments. In the case of a few commands about which there is some uncertainty as to the men bringing the typhoid infection from their homes, I may state that in all of these there was ample opportunity for the introduction of the specific poison from other commands.

11. *With typhoid fever as widely disseminated as it is in this country, the chances are that if a regiment of 1,300 men should be assembled in any section and kept in a camp, the sanitary conditions of which were perfect, one or more cases of typhoid fever would develop.*—I have already stated my reasons for belief in the above given proposition. In such a camp, however, the disease would not become epidemic, and ultimately it should disappear altogether.

12. *Typhoid fever is disseminated by the transference of the excretions of an infected individual to the alimentary canals of others.*—It is more than probable that many individuals may for a while carry and eliminate the specific bacillus of typhoid fever without themselves developing the disease. It is now a well-known fact that persons who have recovered from typhoid fever may for a long time continue to carry and excrete the specific poison. It has also been shown that the longevity of the typhoid bacillus is much greater than is generally supposed.

13. *Typhoid fever is more likely to become epidemic in camps than in civil life because of the greater difficulty of disposing of the excretions from the human body.*—In fact, the whole question of the prevention of typhoid fever in armies is largely one of the disposition of the excretions.

14. *A man infected with typhoid fever may scatter the infection in every latrine of a regiment before the disease is recognized in himself.*—It must be evident from this that the only way in which typhoid epidemics can be with certainty prevented in armies is by the complete disinfection of the stools of all, both the sick and the well.

15. *Camp pollution was the greatest sanitary sin committed by the troops in 1898.*—In our history of the different regiments given in our report, we have had too frequent opportunity to call attention to the fearful pollution that existed in many camps. We have stated that fecal matter was deposited on the surface about the camps at Chickamauga and at other national encampments. Much of this filth must have been specifically infected with typhoid fever. Sinks were frequently overflowed by heavy rains, and their contents were distributed on the adjoining surface.

16. *Some commands were unwisely located.*—While there is no evidence that many of the places selected for national encampments could be called unhealthful, it is true that some of them were not suited for camp sites. Some regiments at Chickamauga, as we have shown in our report, were so located that they received the drainage of other regimental camps. There was certainly no sufficient excuse for this.

17. *In some instances the space allotted the regiments was inadequate.*—I am forced to conclude that there were line officers in the First and Third Army Corps whose efficiency might have been enhanced by some knowledge of camp hygiene.

18. *Many commands were allowed to remain in one site too long.*—There were regiments at Chickamauga that did not move a tent from the time of arrival in May until that of departure late in August.

19. *Requests for change in location made by medical officers were not always granted.*—As an illustration, I will refer to the official records of the Fifth Pennsylvania. This command reached Chickamauga Park on May 20th, and was unfortunately located on low ground. Requests for change in location were repeatedly sent in during June and July. The earth became muddy, the camp received the washings from other camps above, the sinks rapidly filled with water and overflowed, and yet requests for change in location were unheeded until August 12th, when the regiment was allowed to occupy a new camp two miles to the west and on a higher piece of ground.

20. *Superior line officers can not be held altogether blameless for the unsanitary condition of the camps.*—As we have already seen, some of the regiments were improperly located from a sanitary standpoint. This was done by superior

line officers, and sometimes in the face of protests from the medical officers. The medical officer can only recommend; the line officer may command. We think it unfortunate that no adequate instruction is given in hygiene in our national military school. It does seem that line officers should at least know enough of this subject to be able to recognize the importance of reasonable requests and recommendations made by medical officers.

21. *Greater authority should be given medical officers in matters relating to the hygiene of camps.*—It is of the greatest importance that more authority be granted medical officers in all matters pertaining to the hygiene of camps. Certain men in the medical corps should be selected to do the duties of sanitary inspector, and these should be chosen on account of recognized ability in this particular line. The sanitary inspector should make his reports in duplicate, one copy of which should be presented to the commander in charge of the troops, while the other should be forwarded to the Surgeon-General. When the line officer in command fails to comply with requests made by a medical inspector, he should state in writing the reasons for non-compliance, or at least he should in writing acknowledge the receipt of the recommendation.

22. *It may be stated in a general way that the number of cases of typhoid fever in the different camps varied with the method of disposing of excretions.*—This is well illustrated by the methods of disposing of fecal matter and in the number of cases of typhoid fever in the three divisions of the Seventh Army Corps. The First Division was most uncomfortably located at Miami, Fla., from the last week in June until the second week in August. On the last-mentioned date it was removed to Jacksonville, where it joined the other divisions. During a part of its stay at Miami, and during the entire period of its encampment at Jacksonville, water-carriage was employed for this disposal of fecal matter. In the Second Division the tub system was employed. By this method infected fecal matter was scattered all through the camp. In the Third Division regulation pits were used. The number of cases of typhoid fever was smallest in the First Division, and greatest in the Second Division.

23. *The tub system of disposal of fecal matter as practised in the Second Division of the Seventh Army Corps is to be condemned.*—Of all the methods for the disposal of fecal matter practised in the national encampments in 1898, I regard this as the most unsatisfactory.

24. *The regulation pit system is not a satisfactory system of disposing of fecal matter in permanent camps.*—Especially is this true in hot weather. It is a very difficult thing to have soldiers appreciate the necessity of keeping fecal matter covered. As I have elsewhere stated, in many camps orders were issued requiring each man to cover his stool as soon as deposited, but we did not inspect the pits of a regiment in which we did not find exposed fecal matter. Moreover,

in the camps in 1898 flies swarmed so numerous that the first droppings of fecal matter were often covered with them before the act of defecation was completed. The pit system may be employed when armies are on the march, and stopping at one place for a few days at most, but even then they were sources of danger, and it is quite impossible to prevent the spread of typhoid fever in camps in which this method of disposing of fecal matter is employed.

25. *Our board has recommended that in permanent camps where water-carriage can not be secured, all fecal matter should be disinfected and then carted away from camp.*—For this purpose we have made a special recommendation that galvanized troughs containing milk of lime be used for the reception of all fecal matter, and that the contents of these be removed daily by means of the portable odorless excavator. I am aware of the fact that this method of disposing of fecal matter will be attended by increased cost, but I am confident that it will greatly lessen the number of cases of typhoid fever.

26. *Infected water was not an important factor in the spread of typhoid fever in the national encampments in 1898.*—There probably were local water-supplies that became specifically infected with the typhoid-fever bacillus, but infected water was not the great factor in the causation of this disease.

27. *Flies undoubtedly served as carriers of the infection.*—My reason for believing that flies were active in the dissemination of typhoid fever may be stated as follows: (a.) They swarmed over infected fecal matter in the pits and then visited and fed on the food prepared for the soldiers at the mess tents. In some instances where lime had recently been sprinkled over the contents of the pits, flies with their feet whitened with lime were seen walking over the food. (b.) Officers whose mess tents were protected by means of screens suffered proportionately less from typhoid fever than did those whose tents were not so protected. (c.) Typhoid fever gradually disappeared in the fall of 1898 with the approach of cold weather, and the consequent disabling of the fly. It is possible for the fly to carry the typhoid bacillus in two ways. In the first place, fecal matter containing the typhoid germs may adhere to the fly and be mechanically transported. In the second place, it is possible that the typhoid bacillus may be carried in the digestive organs of the fly and may be deposited with its excrement.

28. *It is more than likely that men transported infected material on their persons or in their clothing, and thus disseminated the disease.*—In some of the commands it was customary to detail men from the line every morning to serve as orderlies at the hospital. These men went to the hospitals, handled bedpans used by persons sick with typhoid fever, and at night returned to their comrades. The most of them were wholly ignorant of the nature of infection and the methods of disinfection. In fact, at one of the division hospitals we saw orderlies of this kind go from

the hospital and partake of their midday lunch without even washing their hands. These men handled not only the food which they ate, but passed articles to their neighbors. It seems to me that a more certain method for the dissemination of infectious disease could hardly be invented.

29. *Personal contact was undoubtedly one of the means by which the infection was spread.*—The truth of this statement will be more evident after an inspection of the chart showing the distribution of the different regiments. On making such an inspection one must be impressed with the fact so plainly evident that men who were closely associated developed typhoid fever simultaneously.

30. *It is probable that the infection was disseminated to some extent through air in the form of dust.*—The shell roads through the encampment at Jacksonville were ground into the finest dust by the heavy army wagons. The scavenger carts carrying the tubs filled with fecal matter passed along these roads, and their course could often be traced by bits of feces falling from the tubs. Other vehicles ground up the fecal matter and dust together, and the winds disseminated these particles here and there. Men inhaled this dust; it was deposited on their food, and men ate the dust. Having seen these things, I am inclined to the opinion that infected dust was one of the factors in the dissemination of typhoid fever. I am aware of the fact that complete desiccation soon destroys the typhoid germ, but dust is not always completely desiccated.

31. *A command badly infected with typhoid fever does not lose the infection by simply changing location.*—I do not mean to say that it is not advantageous for a regiment badly infected with typhoid fever to change its location. On the other hand, in our history of the Second Division of the First Army Corps, we have shown that such change is of advantage and may be followed by a reduction in the number of cases; but mere change in location is not sufficient to stamp out the disease in a command after it has become widely disseminated. The histories of many regiments show this to be true.

32. *When a command badly infected with typhoid fever changes its location, it carries the specific agents of the disease in the bodies of the men, in their clothing, bedding, and tentage.*—This was shown by the fact that when commands changed location, leaving behind all their sick, and when they went to places free from infection, the disease continued with them.

33. *After a command becomes badly infected with typhoid, change of location, together with thorough disinfection of all clothing, bedding and tentage is necessary.*—Even when disinfection is carried out, the command will not altogether lose its typhoid infection, because some of the men will carry the germs of the disease in their bodies.

34. *Even an ocean voyage does not relieve an infected command of its infection.*—This is shown to be the case in the study of various commands that went to Cuba and Porto Rico.

35. *Except in cases of most urgent military necessity one command should not be located on a site recently vacated by another.*—This principle holds good even when the vacating regiment is not known to have suffered from any infectious disease. This axiom in military hygiene was frequently violated during the summer of 1898. In many cases of the state encampments the regiments that responded to the second call were located on sites recently vacated by commands that had preceded to the national encampments.

36. *The fact that a command expects to change its location does not justify neglect of proper policing of the ground occupied.*—The filthy condition of some of the regimental camps at Chickamauga was explained on the ground that each regiment expected to be called to the front in a few days, and therefore neglected camp sanitation. A camp site should be thoroughly policed up to the moment of vacating it. This should be insisted on as a matter of military discipline, and camp commanders should regard proper attention to the sanitation of the sites occupied by their troops as one of their highest duties, and its neglect as a crime.

37. *It is desirable that the soldiers' beds should be raised from the ground.*—In some of the regiments at Camp Alger the tents were never floored. On inspecting these commands in August we found dust several inches deep in the tents. During the day-time, in fair weather, the blankets were taken out, and men, possibly with their feet soiled with infected material, walked around in this dust, and at night threw their blankets down on it and there slept. This was both insanitary and uncleanly.

38. *In some of the encampments the tents were too much crowded.*—This was true both of the space allotted the tents and of the number of men occupying each tent. In some instances the tents of the same company were so close together as to leave no space between them, and those of two adjacent companies were crowded together back to back.

39. *Medical officers should insist that soldiers remove their outer clothing at night when the exigencies of the situation permit.*—With from twelve to sixteen men in a tent, all sleeping in the clothes worn during the day and possibly with some of them soiled with infected fecal material, the effect on the general health certainly could not have been beneficial, and the possibility of the dissemination of the infection must be admitted.

40. *Malaria was not a prevalent disease among the troops that remained in the United States.*—We have shown in our report that blood examinations for the plasmodium of malaria made by competent men at Chickamauga, Knoxville, Camp Mead, and Jacksonville, show that malaria was a rare disease among the troops that remained in the United States.

41. *The continued fever that prevailed among the soldiers in this country in 1898 was typhoid fever.*—There is no evidence that any other con-

tinued fever was found among the troops that remained in the United States. One surgeon claims that dengue prevailed in his regiment at Chickamauga. I think it quite impossible for dengue to have prevailed in one regiment, while all other troops of two army corps encamped at the same place escaped this disease. It was claimed by some that the continued fever prevalent at Chickamauga differed from typhoid, and that it was a disease peculiar to the place; it was designated "Chickamauga fever." That the continued fever prevalent in our camps in 1898 was typhoid fever is demonstrated by the following facts: (a.) When the temperature-curve was not vitiated by the use of antipyretics, it was that of typical typhoid fever. (b.) The fever was not broken or arrested by the administration of quinin. (c.) The death-rate was that of typhoid fever. (d.) Whenever a post-mortem examination was made, and the total of these examinations was considerable, the characteristic lesions of typhoid fever were found.

42. *While our investigations show that coincident infection with malaria and typhoid fever may occur, the resulting complex of symptoms does not seem to be sufficiently well defined and uniform to be recognized as a separate disease.*

In our report we have devoted a special chapter to this subject, and I will be compelled to refer those desiring detailed information to this.

43. *About one-fifth of the soldiers in the national encampments in the U. S. in 1898 developed typhoid fever.*—Among 44,803 officers and men in regiments of the First and Third Army Corps, the records of which we have carefully studied, the number of cases of typhoid fever according to our estimate was 9660. This is equivalent to 21.56 per cent. In the Fourth Army Corps the percentage seems to have been somewhat less. However, the records of some of the regiments of this corps were not well kept, and we can not be so positive concerning the number of cases.

44. *Army surgeons correctly diagnose a little less than half the cases of typhoid fever.*—The total number of probable cases of typhoid fever among the regiments studied at Chickamauga was 9660. Of these 4068 were diagnosed typhoid fever either by regimental or hospital surgeons. Most of the cases improperly diagnosed were sent to general military hospitals, or to civil hospitals with the diagnosis, "malaria." In 80 out of 85 cases sent from the Fifth Maryland to civil hospitals in Baltimore, the diagnosis was changed from malaria to typhoid fever. Of 98 cases sent from the Eighth New York to hospitals in New York City, all were recognized as typhoid fever by the physicians in each of the hospitals, while the majority of these had been entered on sick reports under other diagnoses. The failure of regimental surgeons to properly diagnose many cases of typhoid fever is easily explained. Orders required, very properly, that every man sick for forty-eight hours should be sent to the division hospital. It will be seen from this that

the cases were not under the observation of the regimental surgeon for a sufficient time for him to make a diagnosis. There is also some excuse for the failure of the surgeons at the division hospitals to recognize all the cases of typhoid fever. Many of the less severe of these cases remained in hospitals for a short time, and were furloughed home, or forwarded to some general hospital.

45. *The percentage of deaths among cases of typhoid fever was about 7.5.*—Of the 9660 cases already mentioned as occurring among certain troops at Chickamauga, 713 died. This gives a death-rate of 7.38 per cent. This corresponds closely with the death-rate for typhoid fever in those places in which most accurate records have been kept. In the city of Hamburg, during the years 1886-87, there were 10,823 cases with a death-rate of 8.5 per cent. Brand has collected 19,017 cases treated by cold baths with a mortality of 7.8 per cent. Of the 2293 cases treated in some of the larger hospitals in this country in 1897, 9.24 per cent. died. Further details concerning the mortality in typhoid fever are given in our report.

46. *When a command is thoroughly saturated with typhoid it is probable that from one-third to one-quarter of the men will be found susceptible to the disease.*—I am inclined to believe, but desire to state it as an opinion, that typhoid fever disappeared in some of the regiments only after all the susceptible material had been exhausted. This was probably true in all regiments which had 400 or more cases.

47. *In military practice typhoid fever is often apparently an intermittent disease.*—This fact is shown especially in the study of the Eighth New York. Please bear in mind that I state that typhoid fever is apparently an intermittent disease. I do not mean that the apparent intermissions are afebrile; I only mean that the men sick with this disease had periods of improvement which were so marked that regimental surgeons often returned the men to duty, probably at the request of the men themselves.

48. *The belief that errors in diet with consequent gastric and intestinal catarrh induced typhoid fever is not supported by our investigations.* This belief, which was formerly held by many, is founded on false conclusions arising from erroneous conceptions of the etiology of the disease. Moreover, the early symptoms of typhoid fever are often confounded with those of simple gastro-intestinal catarrh.

49. *The belief that simple gastro-intestinal disturbances predispose to typhoid fever is not supported by our investigations.*—Our studies have forced us to come to the following conclusions concerning the relation between typhoid fever and preceding temporary disorders, including those diagnosed as diarrhea, enteritis, gastro-enteritis, gastroduodenitis, intestinal catarrh, gastro-intestinal catarrh, gastric fever, and simple indigestion: (a.) The temporary gastro-intestinal disturbances of May and June had but little if any effect on subsequent infection with typhoid

fever. (b) The temporary gastro-intestinal disturbances of July and August, instead of pre-disposing to typhoid fever, gave a certain degree of immunity against subsequent infection with this disease.

50. *More than 80 per cent. of the men who developed typhoid fever had no preceding intestinal disorder.*—In 2763 cases in which this point was especially investigated, 2356 were not preceded by any intestinal disorder.

51. *The deaths from typhoid fever were more than 80 per cent. of the total deaths.*—The percentage of deaths of typhoid fever to total deaths is not so high if we accept the diagnoses given in the official reports.

52. *The shortest period of incubation in typhoid fever is probably something under eight days.*—This statement is founded on data obtained by a study of typhoid fever among the hospital corps, men and women nurses at Chickamauga. The details are given in our report.

53. *One who has lived in a camp in which typhoid fever is prevalent is liable to develop this disease any time within eight weeks after leaving such a camp.*—The particulars bearing on this statement are given in the history of the Fifth Pennsylvania.

MEDICAL PROGRESS.

Statistics and Operative Treatment of Rectal Carcinoma.—J. Pichler (*Archiv f. klin. Chir.*, Bd. 21, Hft. 1, 1900, p. 229) discusses this subject. The observations are made from the various methods of approaching the site of disease, namely, bloodless divulsion of the sphincter ani (Simon); circular incision of the anus (Lisfranc); posterior division of the sphincter (Diefenbach); posterior linear incision with preservation of the anus (Kocher); resection of the coccyx (Kocher); resection of the sacrum in part, unilaterally (Kraske), transversely (Bardenheuer and Rose), obliquely (Hochenegg); temporary resection of the sacrum and coccyx (v. Heineke, Levy, Schlange, Kocher, Hegar, Rydygier); parasacral division of the soft parts of the sacrum without resection of bone (Zuckerkandl, Wölfler, Schelky); vaginal approach (Liermann). The oblique method of Hochenegg is the one carefully compared with all the others. This operator had in all 119 cases of carcinoma of the rectum treated in this way with the following results: There were but 10 deaths, distributed as follows, capillary bronchitis, gastro-intestinal hemorrhage, cerebral embolism, internal incarceration. These four are no more attributable to this type of operation than to any other severe surgical procedure and should, therefore, not be counted as affecting the statistics. The other six may be ascribed directly to the technic, although here again are two fatalities due to hemorrhage from varicose veins about the vagina. If these are discarded the final four deaths all due to sepsis, make the percentage 3.4;

if counted the record is 5.04 per cent. Of 583 reports of all known forms of operation 81 died making the proportion 14.3 in the hundred; of the purely perineal avenues of approach 217 records were collected, 37 deaths or 17 per cent. The value of Hochenegg's method of sacral resection is claimed to be in the wide exposure of the field and the perfect drainage obtained. In no case was the bleeding from the bone margins a factor. The review of the subsequent histories of these cases gives the following data: Ten deaths more or less directly connected with the operation: 14 patients disappeared from view; 40 died of relapses with or without metastases, with an average prolongation of life of 21.4 months (individually these 40 lived as follows, 7 about one year, 12 over one year, 16 over two years, 3 over three years, 1 over five years, 1 over eight years); 8 further cases died of inter-current disease (of these 2 of tuberculosis in about one year, 1 of psychosis after one year, 2 of apoplexy in about eight years, 1 of pneumonia after three years, 1 of cancer of the tongue after eighteen months; 1 of endocarditis in four years); 15 have partial subsequent histories, but it is certain that 4 of them lived three years, 2 after six years; 32 are still living (of these 5 over three years, 2 after four years, 3 over five years, 3 after six years, 1 over eleven years, 1 after twelve and three-quarter years, making 29 living after three years or more, the remaining 3 are living less than three years after the operation. If we stop to figure out the percentage of those living three years or more we find 52 cases which can not be counted (10 deaths, 14 without subsequent history, 8 lost sight of about the third year, 20 who had not yet reached the third year, although still alive), leaving 67 cases among which are the 29 above three years, 43.3 per cent. A word must be said about the continence of the rectum after the operation. First, complete control after simple suture, 5 cases; after invagination of the upper into the lower segment and suture, 24 cases; after spontaneous closure of a fistula, 3 cases; after plastic treatment of the same, 2 cases. Second, a sacral artificial anus was established from before backward in 50 cases, from rupture of the suture line in 27 cases. Third, the anus was made in its usual site after ablation of the sphincter in 8 patients. The great majority of the complete-control cases followed their ordinary avocations. Two women had children normally after the operation. Another series of them had bougies passed for a variable time. One acquired a sacral hernia which was controlled by apparatus. Two patients complained of weakness and pain about the sacro-iliac joint. Those with artificial anus soon acquired skill in management and went quite comfortably about their work. The author's experience with recurrences was that these always began in the periproctitic tissue and by pressure and direct extension made colostomies necessary. Occasionally, the cancer extended between the bowel and the bone and gave other

terrible outward manifestations. Even these cases had been benefited because the involvement of nerves, urethra, bladder and other organs had been postponed, as is not the result of simply doing a colostomy early as a palliative measure. As to the etiology of these cases, 72 were males, 47 females; age limits twenty-one to seventy-two years; ages predominating forty to sixty; out-door work was the commonest vocation; two were brothers each operated on within one year; one was treated for carcinoma of the rectum and a year later for carcinoma of the tongue; one young woman appeared to have acquired it by using for enemata the same douche nozzle as her cancerous mother; pronounced alcoholism was frequent. In addition to rectal cancer Hochenegg has used this method in 49 other cases with 8 deaths, distributed as follows: Malformations, prolapse and stricture of the rectum, retroversions of the uterus, cystic tumor of the parametrium, myomata and carcinomata uteri, sacral tumor, pelvic abscesses, and dystopia of the kidneys.

Sterilization of Catgut.—E. Saul (*Arch. f. klin. Chir.*, 1900, Bd. 21, Heft 1, p. 285) says that chemical causes of suppuration may be present as well as bacteriological. Under these must be remembered: (1) Ptomaines in the gut itself which may be best destroyed by boiling alcohol. (2) Fatty substances covering the catgut during manufacture. Boiling alcohol will remove these more completely than soap and water. (3) Argentic salts, which are present in catgut impregnated by the method suggested by Credé. (4) Corrosive sublimate suppuration in virtue of soaking the gut in its solutions. It is impossible to remove it from the substance of the gut because it is chemically combined therewith. Carbolic acid has no such affinity. This acid may be dissolved out by pure alcohol. If evaporation occur the concentration resulting may approach toxic limits. It is entirely true that experimentally bichloride of mercury is of higher disinfecting power than carbolic acid, but the experiments of the former involve an error, while those of the latter show none. One is consequently subjected to an unavoidable disappointment if disinfection is founded on a corrosive sublimate method. Jacobi, working under Rosenbach's direction, destroyed with boiling alcohol in fifteen minutes anthrax spores, which resist boiling water about twelve minutes. For this reason shorter exposures were not attempted. Hofmeister killed the bacillus subtilis with boiling alcohol in two hours. This germ withstands boiling water one and a half to two hours. The conclusion is almost inevitable that boiling in alcohol is almost as effective as boiling in water.

Histology of Leucocytes and Spores.—Continuing the research work with his new stain, K. Nakanishi (*Munch. med. Woch.*, May 15, 1900) adds the following to complete his former article: The best criterion of the vitality of leucocytes is the intensity with which their nuclei take up the

stain. By this method it has been found that 3-5 per cent. of the polynuclear leucocytes of normal blood show beginning degeneration, while in shed blood leucocytes with undegenerated nuclear protoplasm could still be demonstrated after four weeks, provided proper preservation was obtained. The cell-division of bacteria and the genesis of their spores could be well studied with the new stain. The nucleus forms an hour-glass shape and soon divides and the daughter-nuclei will migrate toward the poles of the cell which now swell and also undergo division through the development of a partition in the middle. When unfavorable circumstances exist, a differentiation in the cell-protoplasm will occur since half of this will remain unchanged while in the other half the chromophilic matter will concentrate itself about the nucleus leading to an apparent swelling and elongation of this. A membrane forms and the mass will lose its affinity for the dye and appear like a minute fat-droplet. The uninvolved protoplasm of the original cell will be more and more encroached upon by the growth of the spore which soon becomes free.

The Loss of Hair.—Alopecia, although sometimes depending largely on hereditary influences, nevertheless in a majority of cases is probably due to a curable disease of the scalp and, hence, the statistics and treatment in regard to this condition given by G. T. Jackson (*Med. Record*, May 26, 1900) are especially interesting. Detailed information is given of three hundred cases in private practice and the following inferences were drawn: It is very probable that the loss of hair is much more frequent among men than women and although bachelors seem especially prone to this misfortune personal pride no doubt influences the statistics somewhat, and it is not likely that the married or single state has any influence in producing baldness. A great majority of the patients lead indoor lives and this, when coupled with worry and nerve-strain, is a predisposing, if not a determining, cause of baldness. Sixty-six per cent. of cases began before the thirtieth year and it would seem if one passes this age without showing signs of incipient baldness, the chances for keeping the hair intact are very much increased. As to the causes of the loss of hair heredity is a predisposing factor in a majority of cases and a determining cause in some. All debilitating diseases predispose to loss of hair and dandruff in some form is the exciting cause in over seventy per cent. Positive results in the treatment of this condition were obtained by the use of precipitated sulphur, ten per cent. in a good cold cream, with or without either salicylic acid, three to five per cent., or extract of jaborandi, a dram to the ounce. An ointment composed of ammoniated mercury gr. xx., calomel gr. xl., in an ounce of vaseline is also of value. Resorcin in solution with alcohol and a few drops of castor oil is recommended by some. After dandruff has been checked massage is very useful in stimulating the growth of

the hair. The sulphur preparations are used once every day for three days and then the head is shampooed. The ointment is then applied every second day for ten days and continued twice a week for some time. Resorcin is used at first in three- and then five- or ten-per-cent. solutions night and morning.

Mammary Epithelioma and Tuberculous Peritonitis.—Le Dentu and Morestin report the following case (*Revue de Chirurgie*, 1900, p. 425): The patient, an Englishwoman, aged twenty-seven years, demi-prostitute, appeared April, 1897, at the Broussais Hospital; she was tall, thin, and emaciated; there was a history of menstrual irregularities and syphilis; otherwise no illnesses. Breasts, always abnormally small, were suddenly attacked by violent enlargement with pain, discomfort and dragging weight; within two days their volume had increased about tenfold and after two weeks in a stationary state were first seen. On examination they were in marked contrast to the emaciated patient, uniformly tense, enlarged to the size of the head of a six-year-old child. Their skin was slightly modified, somewhat rosy, thin, tense, transparent, showing the veins beneath much engorged. Palpation showed beneath slightly movable skin, each breast firm to hard, uniform surface, no lobulations, depressions, fluctuation or softening, no circumscribed outline and no gland-tissue differentiated. This was incorporated in the extensive infiltration, which was movable on the deep parts. No axillary nodes. No secretion present in the nipples. No subjective symptoms. The diagnoses offered were inflammatory infiltration, acute bilateral mastitis and fulminating carcinoma. The last appeared most probable, but hardly agreed with the hyperacute onset. Under gentle pressure in one week the size and hardness decreased, but again relapsed finally to improve again. During these changes there were no systemic manifestations. After a few weeks these acute conditions had disappeared when many small hard irregular nodular partially-fixed masses incorporated with the gland-substance were felt, especially in the lower and outer part of both breasts, but most distinctly in the right. Affected lymph nodes now appeared markedly in the right, slightly in the left axilla. Skin still normal. Nipples progressively retracting. Breasts movable still beneath the skin and upon the deeper tissues. In June tuberculous peritonitis originating in the uterine appendages appeared and suggested a tuberculous invasion of both breasts along with carcinoma. No other tubercular lesions nor other systemic symptoms were apparent. November 5, 1897, laparotomy was done with relief of the peritonitis, which was found to be well marked and general. Prompt recovery. Discharge late in January, 1898, much improved, with the breasts also for the third time softer. The patient returned in May, 1898, with both breasts of stony hardness, right larger, both nipples deeply retracted, impossible to evert or

pull them out, axillary nodes much affected. The skin of the left organ appeared still normal but the right was invaded by very numerous small nodules, which the patient refused to have removed and examined pathologically. Without any tubercular lesions appearing elsewhere the peritonitis relapsed, requiring repeated aspirations. Death occurred September 10, 1898. The autopsy showed the extent and degree of the peritonitis; no pulmonary or other foci. The breasts were indurated and cystic. The cystic fluid inoculated tuberculosis into guinea-pigs. The skin was invaded by inflammatory and proliferative changes. The gland areas showed typical epithelioma. There was absence of tuberculous tissue anywhere in these organs. The axillary glands showed cancerous invasion. The diagnosis was finally bilateral cancer with deposits of tubercle bacilli accounting for the inoculation results, but of too recent occurrence to cause tubercles.

Importance of the Anterior Incision for Resection of the Hip.—According to Rochet (*Revue de Chirurgie*, April 10, 1900) of the posterior incisions Langenbeck's rectilinear and Ollier's angular are the best. Ollier has taught that the incision may occupy any part of the area included in a Y the vertical stem of which is applied to the external surface and posterior border of the femur and posterior ascending branch directed to the posterior superior spine, while the anterior upper arm points half-way between the anterior superior and the posterior superior spine of the ilium. Free exposure of the bone is gained by either of the above methods, but at the expense of several of the muscles of the region. In young subjects where the trochanter must be reached Ollier also uses an incision postero-externally to it, convex downward. With this the trochanter and all its muscle-attachments are laid bare. He does not condemn the anterior or antero-external method, recognizes its absence of damage to the muscles but claims it affords less perfect drainage than the posterior incisions. E. Vincent reports 52 cases in which the trochanteric exposure was resorted to with good results. Up to 1895 the author always followed the posterior avenues of treatment, but has since then made the anterior incisions with entirely good results. The technic is similar to that enunciated long since by Schede, differing slightly. The incision begins just below the anterior superior spine of the ilium on the antero-external aspect of the thigh, slightly internal to the prominence of the rectus femoris, descends vertically 3-5 inches, and exposes the muscles, which Schede separates bluntly, carrying the rectus and sartorius outward and the psoas-iliacus inward, but the author retracts the sartorius and psoas-iliacus inward and the tensor fasciæ late and rectus femoris sharply outward. The field thus produced shows the base of the neck more freely and a wound whose margins are not restricted by the sartorius whose oblique fibers fix the external lip in the

former procedure. For the further wide access to the capsule the psoas tendon must be boldly separated from it by blunt dissection with a curved sound. As the division advances the muscle may be more and more retracted inward. One does not meet with any nerves or vessels of importance. The capsule is then incised from without along the axis of the neck and dividing the cotyloid ligament facilitates the dislocation, which with the more or less altered head is easily accomplished by forcible extension, outward rotation and pushing upward. The ligamentum teres is then divided. If the neck is to be resected close to its base the capsule must be loosened everywhere to the margins of the trochanter. More space can be gained, as in cases of tuberculosis with much suppuration and of complete or partial ankylosis by making a short transverse outward division of the rectus for part of its width, beginning preferably at the lower end, occasionally at the middle of the primary incision. The vastus externus and internus compensate for this damage, while the buttock remains untouched, which in the posterior incisions is irretrievably injured. After the ablation of the head and neck the cavity is wide open for the investigation of all the hard and soft parts much better than in the posterior operations, except those situated behind and below the joint which in that method are openly in view. Nevertheless, the anterior incision gives sufficiently unrestricted exposure to render treatment easy. The conclusions reached are that the posterior method is the better in partial or absolute ankylosis, in extensive suppuration and widespread tuberculosis, by the larger exposure and more direct drainage. That the anterior incision is the better in young subjects for coxalgia, for separation of the head and in general in all cases because it does not injure the muscular support and action of the buttock, renders original replacement and subsequent maintenance of apposition of the bones more easy and efficacious, makes the renewal of dressings less trying for the patient and attendants, exposes the important part of the dressing less to infection from fecal matter, and, finally, when drainage may fail, small counteropenings posteriorly will suffice to obviate the difficulty.

Epicarin in Dermatology.—The fact that most antiparasitic remedies are too irritating for delicate skins has led C. G. Pfeifferberger (*Klin. therap. Woch.*, May 13, 1900) to try epicarin with the best results. Epicarin is a derivative of the naphthol series and constitutes a reddish powder of slight acid odor which in the form of a seven-per-cent. ointment is especially indicated in scabies and prurigo of children. A marked phenomenon is the rapid disappearance of pruritus. After one or two inunctions the skin will become red and dry with a tendency toward cracking. To prevent this and to hasten desquamation, and at the same time to control the coexisting eczema, it is advisable to resort to diach-

ylon ointment, followed on the next day by a warm bath, and returning to epicarin only when renewed pruritus appears. The duration of the treatment is usually less than nine days. In eczema pure and simple, epicarin does more harm than good.

Remarks on Diphtheria.—J. W. Jervy (*N. Y. Med. Jour.*, June 2, 1900) advances many useful opinions with reference to the diagnosis and management of diphtheria. The atypical forms he classifies according to Koplik as follows: (1) There may be no local manifestations of membrane, but a slight angina with croupy cough. These cases may, however, convey a severe disease to others. (2) There are cases in which the tonsils are covered by a pultaceous exudate, but no consistent membrane is present. (3) Cases may present a punctate form of membrane, isolated and usually on the surface of the tonsils. (4) Cases which begin and run their entire course as a simple follicular tonsillitis. (5) Heubner describes cases, usually secondary, in young persons the subjects of wasting diseases, such as rickets or tuberculosis. (6) A mild chronic type of diphtheria has been observed by the author, with or without an accompanying membrane which usually appears in the nose or nasopharynx. As the diagnosis is so difficult, or even impossible, in these atypical cases, a microscopic examination is almost imperative, not so much on account of the recovery of that particular patient as affording knowledge which may prevent the spread of disease. The author states that he believes that a diphtheria infection is added to about twenty per cent. of all scarlet-fever cases. He also says that the diagnosis of diphtheria is frequently made for the first time when certain post-diphtheritic lesions are recognized. An intimate connection between diphtheria and acute rheumatism is also suggested by the author who urges that both are specific infectious diseases, causing serious local disturbances by the formation of fibrinous exudates, and showing marked systemic toxemia. Diphtheria is most frequent in children from one to fifteen years of age, while rheumatism is most commonly seen from fifteen to forty.

Uterine Tuberculosis.—Three cases of this affection are described by Michaelis (*Beitr. z. Geburtsh. u. Gynakol.*, 1900, Band 3, Heft 1). In the first a primary cervical focus had appeared. The macroscopical diagnosis was a cancerous invasion of the lips of the os uteri. Total hysterectomy was done and no recurrence locally or generally had become evident after three and a half years. In the other two cases the tuberculosis was secondary to a polypus of the body in one case, and to a secondary cervical disease in the third patient. In all there was hyperplasia of the glandular and connective tissue, metaplasia of the epithelium and changes of the epithelium and stroma cells into an epithelioid type.

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SATURDAY, JUNE 9, 1900.

FIFTY-FIRST ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

As might have been expected at this season of the year Atlantic City proved a very attractive place for medical men. The record registration, that of the annual session at Philadelphia three years ago, when 1994 members were present, was reached on the second day of the meeting. The number of medical men from the East was especially noticeable this year. New York sent a larger delegation than ever before. The awakening interest in the New York State and County Medical Association had had a very noticeable effect on New York interest in the National Association. It seems clear that the unfortunate division of medical society interests in New York which has kept the Empire State from exercising her due influence in National medical matters will soon be bridged over by the realization that a great National Association, both powerful and dignified, can accomplish almost incalculable good in the betterment of present medical conditions in this country.

Probably no presidential address to the Association in recent years has been listened to with such careful attention as was that of Dr. Keen,

and none greeted with more enthusiastic marks of approval or more generous applause. The address appears in the present issue of the MEDICAL NEWS and deserves faithful perusal by all who were not at the meeting. In Dr. Keen's hands the old antivivisection question becomes almost new.

The questions of endowment for medical teaching and research received a dignified presentation that puts the matter clearly before the public. The comparative endowments of medical and theological schools show how much the existence of the private medical school in the past has hampered the cause of medical education. It suggests a vista of most encouraging possibilities now that medical schools have become in fact great public institutions.

A feature of these yearly meetings of the American Medical Association that is every year growing in significance is the sessions of auxiliary bodies of medical men representing special phases of professional life. The National Confederation of Medical Examining Boards, the Association of Medical Colleges, the American Academy of Medicine, the American Medical Editors' Association—all are serving the very commendable purpose of bringing men together who are engaged in similar lines of medical work. These annual reunions cannot fail to be of great service in broadening the views, while at the same time adding to the practical knowledge from the experience of colleagues. Standards of medical education are raised as a result of the association of educators seriously intent on training as well as attracting medical students. Members of State Examining Boards learn from each other the lesson of dealing with legislatures for the suppression of quackery by the successes and failures in States other than their own. The present condition of opinion among the members of the Confederation of Examiners seems to show that it will not be long before the privilege of interstate exchange of medical licenses and the fullest medical reciprocity will be a fact and not a dream. In a word, there lies hidden in the proceedings of these related organizations, neglected by the profession at large, unknown even to most of the members of the American Medical Association itself, the story of many a bit of progress that will in the near future contribute not a little to the amelioration of present evils in medicine.

The smallpox epidemic that is reported from various parts of the country occupied the atten-

tion of nearly a full session of the Section on Medicine. Officers of Health Boards from various States are strongly of the opinion that we are on the eve of a serious outbreak of smallpox in many parts of the country unless stringent precautions are taken to prevent its further spread. Meantime, there are experts in smallpox who insist that some of the epidemics now raging in the South are not true smallpox. Evidently there is opportunity for painstaking investigation that may settle disputed diagnosis and perhaps prove a distinct contribution to nosology.

Discussions on dysentery, yellow fever and rheumatic heart-complications were contributed to by authorities on these subjects. The question, is acute jail and work-house dysentery, as it occurs epidemically in this country, due to the bacillus isolated at Manila by Flexner, is suggested by Osler as well worth investigation. The bacillus *icteroides* is not unquestioningly accepted for yellow fever, although its cause was well advocated. All are agreed that for the prevention and amelioration of heart-complications in rheumatism absolute rest is the most essential part of the treatment.

The Atlantic City meeting has been the most successful of the American Medical Association to date. The social side of the meeting was most interestingly filled by the arrangements of the local committee and the features of it will long be remembered by the visitors. There was very little of medical politics in evidence this year and the ideal of a friendly meeting of brothers in medicine to discuss subjects of mutual interest was more perfectly fulfilled than ever before.

PERNICIOUS ANEMIA—FREQUENCY AND ETIOLOGY.

IN our editorial on the recent Congress of American Physicians and Surgeons we called attention to the fact that pernicious anemia seems to be much more frequent everywhere, and especially in this country, than has been previously noted.

Until Biermer's article in 1871, none but isolated cases of the disease had been reported. Addison's marvelous discernment and power of synthesis enabled him years before to pick out certain fatally progressive cases of anemia as distinct nosological entities, but his observation attracted little attention and the disease he described was considered extremely rare. At the last

meeting of the Association of American Physicians one hundred and fifty cases of pernicious anemia that have been seen by American medical men within the last ten years were discussed. Rarity, therefore, can scarcely be considered a distinctive note of the disease. Practitioners who are expert in blood-work and who are on the alert for pernicious anemia will doubtless henceforth see many more cases of the disease than have been reported in the past.

The cause of the disease remains almost as much a mystery as ever. Two recent contributions to its etiology are of special interest. It has been pointed out in Germany that toxic influences are often at work on the organism during long periods previous to the development of pernicious anemia. In several cases morphinism was a feature of the previous history; in others plumbism. Dr. Grawitz of Berlin has especially insisted on this toxic origin of pernicious anemia. He has seen it in workers in laundries where gas was used for heating purposes and the poisonous products of incomplete combustion were allowed to vitiate the air of the rooms, in which employees were crowded together for twelve to fourteen hours a day. He also insists on the toxins of tertiary syphilis and the sclerotic bone changes they induce, as important factors in the etiology of the intense blood dyscrasia.

Drs. Cabot of Boston and Billings of Chicago, who reported most of the cases at the recent meeting, are agreed that the absorption of toxins from the gastro-intestinal tract plays an important rôle in the etiology of the disease. Constipation has practically always existed for a good while before the development of the pernicious symptoms, and, as Dr. Cabot points out, the mild cases are those which have a tendency to diarrhea. When a corresponding idea with regard to the etiology of chlorosis was broached by Sir Andrew Clark, to the effect that intestinal autoinfection was a prominent factor in that disease, the notion was not at first received with any favor. We have learned to appreciate, however, how important the gastro-intestinal element is in the etiology of chlorotic anemia and doubtless will in time also ascribe to it its due influence in pernicious anemia.

Meantime, this suggestion as to the etiology of the disease seems about to bear fruit for the still more arid matter of the therapeutics of the disease. Mild purgation accomplishes more than any other form of treatment. Besides this hypodermatic injections of normal salt solution, given

on the theory of washing toxins out of the blood, have proved of some benefit. The only therapeutic agent of promise is arsenic. In some hands this has proved distinctly beneficial, but, unfortunately, in others it has failed to fulfil the expectations aroused by the claims of good observers.

ECHOES AND NEWS.

Testing Filters.—The Philadelphia Bureau of Health is making a test of water-filters with the object of placing them in the school buildings of the city.

Accident to a Physician.—Dr. Justin Herold of New York was badly hurt recently in a collision between a trolley car and a cross-town horse car. His leg was crushed. He was taken to the Presbyterian Hospital.

The Associated Physicians of Long Island.—The spring meeting of this Association will be held at Northport June 16th. The Northport Yacht Club and municipality will entertain the members of the organization.

Father Damien's Companion.—The Rev. Father L. L. Conrady, M.D., is in Philadelphia. He has spent eleven years among the Hawaiian lepers and was with Father Damien when he died. He has lately received the degree of M.D. and will work among the lepers in China.

Philadelphia Health Report.—Deaths for the week ending June 2d were 419, a decrease of 5 from those of last week and 7 from the corresponding week of last year. Contagious diseases: Diphtheria, 56 cases, 9 deaths; scarlet fever, 64 cases, 5 deaths; typhoid fever, 51 cases, 10 deaths. Influenza caused 2 deaths.

Honor Men at Columbia.—The following ten students were the highest in standing at the College of Physicians and Surgeons and are privileged to compete for the Harsen Prizes of \$500, \$300 and \$200 respectively: Otto Hensel, H. G. Dorman, E. L. Beebe, A. W. Bingham, M. G. Seelig, T. J. Abbott, K. M. Vogel, A. W. Habschmitt, E. Moschcowitz, P. E. W. Menk.

The Pathological Institute.—On account of the space required in the present number for the report of the American Medical Association the publication of letters from Dr. Spitzka and Dr. Van Geison, in reply to the communications of Dr. Wise in regard to the Pathological Institute which appeared in the MEDICAL NEWS of June 2d, has necessarily been postponed until our next issue.

The Welsh Festschrift.—Following the Festschrift of Dr. A. Jacobi, we note with pleasure the "Contributions to the Science of Medicine," dedicated by his pupils to Prof. William H. Welsh of Johns Hopkins University on the twen-

ty-fifth anniversary of his Doctorate. This is a magnificent quarto volume of 1066 pages, beautifully illustrated, issued from the Johns Hopkins Press. It contains some thirty-eight articles.

Quarantine Station Visited.—On June 2d Drs. Janeway, Bryant, Peabody, Polk, Biggs, Gardner, McLane, Derby, Draper and Prudden of the Medical Consulting Board of the Department of Health at Quarantine in New York Harbor, visited the boats and buildings of the Department, and also inspected Hoffman and Swinburne Islands. Dr. A. H. Doty was warmly complimented on the condition of the Quarantine Station.

Scientific Men to Meet in New York.—The fiftieth annual meeting and reception of the American Association for the Advancement of Science will be held at Columbia University, New York, during the week beginning June 23d. In this Association are included the fifteen largest scientific societies in America, and among them will be represented the American Chemical Society, the American Microscopical Society, the American Psychological Society and the American Physical Society. Governor Roosevelt will make the address of welcome.

Athletics Barred.—The College of Physicians and Surgeons of Chicago, after an animated debate, has decided henceforth to refuse recognition to athletics and no longer gives official sanction and support to the College football team which has taken so prominent a part in inter-collegiate athletic competitions. This step has been taken because experience has taught the Faculty that College athletics have a demoralizing and disturbing influence on the students and interfere with the educational work of the College.

Cornell Commencement.—The second annual commencement of Cornell University Medical College was well attended last night at Carnegie Hall, New York City. Fifty-three graduates received their diplomas from Dr. J. G. Schurman, President of Cornell University. Of this number twenty-one were women graduates, who in their mortar-boards and academic gowns made a pleasing appearance. Prof. Schurman announced that thirty-four of the graduates have already received appointments in hospitals in this and adjoining cities.

Death of Dr. Miller.—Dr. Truman W. Miller died May 31st at his residence in Chicago. An attack of grip was followed by blood-poisoning. He was President of the Chicago Polyclinic and Professor of Surgery in that institution. He was consulting surgeon to St. Joseph's and the Alexian Brothers' Hospitals; surgeon-in-chief to one or two railroads, and for many years was attending surgeon of the Cook County Hospital. Dr. Miller was born in Seneca County, N. Y., March 2, 1840. He took his first course of studies at Obart College, Geneva, N. Y., and com-

pleted his education at the College of Physicians and Surgeons, New York.

Faculty Changes.—At the annual election of the College of Physicians and Surgeons of Chicago, which preceded the discussion on athletics and other subjects, Dr. William E. Quine was elected Dean; Dr. D. A. K. Steele, the Actuary, and Dr. William Allen Pusey, Secretary. Dr. Louis J. Mitchell was appointed Professor of Anatomy; Dr. H. E. Santee, Professor of Anatomy; Dr. Frank X. Walls, Professor of Practice of Medicine; Dr. John L. Porter, Professor of Orthopedic Surgery; Dr. D. N. Eisendrath, Professor of Surgical Pathology; Dr. Joseph M. Patton, Professor of Physical Diagnosis. Dr. W. A. Evans has been retained as Professor of Pathology.

Public Health Matters.—There were 426 deaths reported to the Chicago Health Department during the last week, being 76 fewer than the preceding week, and 14 fewer than the corresponding week of 1899. All the principal causes of death show a reduction excepting bronchitis, consumption and heart-diseases. Consumption was the leading cause of mortality. There were 60 deaths recorded from this disease. Deaths from heart-diseases continue to be exceptionally high, 433 having been reported during the week from this cause. There were 11 deaths from measles and 7 from whooping-cough during the week. A reduction of 60 per cent. in deaths from the acute intestinal diseases is also reported, due largely to lower temperature prevailing.

Chicago's "Diploma Mill."—A Post-Office inspector invaded the Metropolitan Medical College on West Van Buren Street, Chicago, last Monday, and arrested four of its officers. At last report the president, vice-president and two secretaries were in prison awaiting the appearance of acceptable bondsmen. The institution is also known as the Independent Medical College and the National Law School, and the evidence shows that its faculty has been selling degrees for the practice of medicine and law at prices ranging from \$3 to \$200. The inspector who made the arrest says the fraud is one of the largest the postal authorities have ever had to deal with and that the "graduates" of the institution are practising in every State and even abroad.

The Psychology of Crowds.—Some of M. Le Bon's views, as set forth in his book on "*The Crowd*" are well exemplified by the following incident: A free dispensary in Chicago, said to be conducted in the interests of medical students, was attacked on May 31st by a crowd of infuriated Bohemians and Lithuanians. Stories of bodies being dissected in the dispensary had created terror among those ignorant people. On the above-mentioned date a boy disappeared. One of his companions at once reported that he had been waylaid and killed by the doctors. Within a few minutes afterward a mob of several hundred people were at work demolishing the build-

ing. They came upon the missing child lying quietly and as happy as his illness would permit him to be. Presently the police appeared and a number of arrests were made.

Obituary.—Dr. Joseph Davis Osborne, a well-known physician of Newark, New Jersey, died on June 2d in his sixty-seventh year. He was graduated from the College of Physicians and Surgeons. He served throughout the war as a surgeon in the Fourth New Jersey Volunteers. Dr. E. O. Shakespeare, an eminent pathologist, died suddenly of heart-disease in Philadelphia June 1st. He was born in 1846 and graduated from the medical department of the University of Pennsylvania in 1869. He practised at Dover, Del., until 1875, since which time he has resided in Philadelphia. He served on the staff of the Philadelphia Hospital and was at various times president of local and national societies. In 1885 he was appointed by President Cleveland to report on cholera in Europe and India, his report being a most valuable one. He also made various other investigations regarding contagious diseases, studying with Koch in 1886. By Dr. Shakespeare's death Philadelphia loses one of its most tireless and brilliant physicians.

The Bubonic Plague.—Advices from various parts of the globe concerning the progress of the plague are not calculated to relieve the sense of danger which must possess the minds of all who have observed its course. Although Dr. George F. Shady, during his recent visit to San Francisco in behalf of the *New York Herald*, was able to report that no case was then known to the local health board, he had scarcely left the city before bacteriologic investigation proved a suspicious death to have resulted from the disease. Ten thousand Chinese in that city are now using every means, both legal and indirect, to thwart the efforts of the sanitary officers. The Chinese minister at Washington has been appealed to by his countrymen in San Francisco for aid against what they consider unjust quarantine measures. Temporary accommodations for the segregation of three thousand Chinese upon Angel Island have been provided.—Sixty-one cases of plague are reported at Rio Janeiro in Brazil.—The Argentine authorities have taken advantage of the disappearance of the disease since May 11th to declare the Republic free from the plague; but at the same time they have decided to close the public schools lest it recur.—New cases and deaths are daily reported from Port Said.—India continues to reckon its victims by thousands, and China and Japan are constant sources of danger to our commerce.

The Medical Advertiser.—Interesting features of the recent meeting of the American Medical Association held at Atlantic City were the numerous booths of many of our prominent drug manufacturers, medical publishers, scientific and surgical instrument makers. These booths were very attractively gotten up and claimed much attention from the doctors.

CORRESPONDENCE.

OUR LONDON LETTER.

[From Our Special Correspondent.]

LONDON, May 31, 1900.

CONFERENCE OF MEDICAL ASSOCIATION ON MEDICAL ORGANIZATION—REFORM OF THE GENERAL MEDICAL COUNCIL DEMANDED—DEPUTATION OF THE BRITISH MEDICAL ASSOCIATION TO THE GOVERNMENT ON THE MIDWIVES' BILL—THE CHAIR OF MEDICINE IN THE UNIVERSITY OF EDINBURGH—APPOINTMENT OF DR. JOHN WYLIE—DEATH OF GEORGE VINER ELLIS, THE ANATOMIST—THE CREMATION MOVEMENT IN ENGLAND—ERECTION OF THE FIRST MUNICIPAL CREMATORIUM—DEMOLITION OF INSANITARY HOUSES AND LEGAL QUIBBLES.

DELEGATES from over fifty medical associations have met at Manchester for a conference on medical organization. Mr. Victor Horsley in opening the meeting alluded to the impossibility of obtaining adequate discussion of the topics to be dealt with at the meetings of the British Medical Association. The General Medical Council is not as fully representative of the profession as it should be, considering the judicial power which it possesses over every member of the profession and its position as arbiter of medical education. The Council is a place of retreat for members of the profession who have practically given up work and have lost touch with the medical schools. Mr. Horsley advocated an annual registration fee for the medical profession similar to that paid by the lawyers, so that by means of larger funds the General Medical Council would be better able to carry on its work. With a strong financial position it would have greater influence on the Government, for the Government looks upon all bodies that approach it in a kind of materialistic way, and if it knows that a body is wealthy it considers that its stake in the country is greater! This argument is certainly a startling commentary by a member of the General Medical Council who ought to know something about the ways of the Government. If such a spirit of sordid materialism dominates the Government in medical legislation which intimately concerns the whole country, rich and poor alike; if in deciding what is for the benefit of the community at large they are to be influenced by the state of the banking-account of the General Medical Council, how will their actions be determined in other spheres where higher motives can have much less weight? Yet there are people who say that financial motives have nothing to do with the policy which brought about the South African War! A resolution that general practitioners should have a much larger representation on the General Medical Council was carried. Resolutions protesting against any legislation that will give a legal status to midwives as a class, in favor of raising the standard of preliminary education necessary for admission to the medical profession, that the right

of receiving pupils be restored to general practitioners, and that the benefits of hospitals and medical charities should be limited to persons of limited means, were also carried.

In connection with the Midwives' Bill a deputation from the British Medical Association was received at the House of Commons by the Solicitor General with the object of explaining "the changes which were considered necessary in the public welfare." The deputation considered that the first defect in the Bill was that it contained no penalty for malpractice and that it would be most difficult to reach an offender. The Central Midwives' Board would consist of London men only who could not exercise sufficient control. The Board should be made representative of the different districts in the country. It ought to be made clear that the failure of a midwife to summon medical aid in cases of difficulty or danger was misconduct within the meaning of the Act.

Dr. John Wylie has been appointed to the Chair of Medicine in the University of Edinburgh rendered vacant by the death of Sir Thomas Grainger Stewart. He is fifty-six years of age. He began the study of medicine in the University and graduated with honors in 1865, being awarded a gold medal. He has held the posts of house-physician and house-surgeon in the Royal Infirmary. In 1870 he became a Fellow of the Royal College of Physicians and Lecturer on Pathology in the Extra-Academical School. In 1878 he was appointed Lecturer on the Practice of Physic. In 1876 he was made Assistant Physician to the Royal Infirmary, and in 1882 Physician. In addition to the teaching of medicine implied by these appointments Dr. Wylie has in connection with his work as an extra-academical lecturer conducted special supplementary summer courses on medical ophthalmology, laryngology, and electricity. When Professor Fraser went to India on the Plague Commission Dr. Wylie was requested to teach clinical medicine in the University in his stead and to take charge of his wards in the Royal Infirmary. His most important publication is a book on "The Disorders of Speech," which appeared in 1894. His reputation in Edinburgh as a diagnostician and clinical teacher has always been exceedingly high. His lectures and clinics are the most popular in the School. It is noteworthy that Dr. Wylie did not support his application for the Chair of Medicine by a single testimonial, but relied solely on his work and appointments.

The death of George Viner Ellis, F.R.C.S., the anatomist, recalls to the present generation of practitioners a name that was a household word in their student days. His book entitled "Demonstrations of Anatomy" was universally recognized as the standard of the most reliable works extant. He was born in 1812 at Ministerworth near Gloucester, and was apprenticed to a local medical man, but at the instigation of his uncle, Daniel Ellis, F.R.S., he was sent to University College which had been only recently founded. He became M.R.C.S. in 1835, and was elected

one of the original Fellows of the College of Surgeons in 1843. He was a very successful student and was appointed Demonstrator of Anatomy under Professor Richard Quain. In 1850 he succeeded him as Professor of Anatomy. Together with William Sharpey he co-edited the sixth edition of "Quain's Elements of Anatomy." In 1865, in conjunction with Mr. G. H. Ford, he published "Illustrations of Dissections"—a series of life-size colored plates which found a place on the walls of many dissecting-rooms. He devoted his life to the teaching of anatomy, and labored indefatigably. One of his peculiarities was that he would not allow smoking in the dissecting-room. On one occasion the students petitioned the Council for leave to purify the atmosphere with "the fragrant leaf." The permission was granted, but Ellis sent in his resignation and would not withdraw it until the permission was rescinded. His most important observation was the discovery of the corrugator ani muscle.

In a few weeks the Hull Corporation will have completed the erection of the first municipal crematorium in England. The Corporation determined eight years ago that in the public interest a crematorium was desirable, but, although preparations were at once begun, it has been found impossible to complete the work earlier. Many obstacles and prejudices had to be overcome. The example of Hull has stimulated other progressive cities. A large number of corporations, including Bournemouth, Cambridge, Exeter, the City of London, Sheffield, and Walsall, are seeking powers in Parliament to establish crematories, whilst other towns which have obtained powers are putting them into operation. The Hull Crematorium is a picturesque red-brick building with artificial stone dressing. The chapel is a spacious apartment, twenty-four feet square, and leads to the incinerating-chamber, which is surmounted by a seventy-foot tower forming a screen to the chimney. The interior of the cremating-chamber is quite invisible to the mourners. The coffin is placed upon a catafalque, and when the committal sentence is reached in the religious service it passes noiselessly by means of a hidden mechanism through curtains into an intermediate chamber. The curtains fall before the door of the cremating-chamber opens. The chamber is filled with an intensely oxidizing gas in a state of incandescence. The process occupies about an hour and there is no noise, smoke or flame. The ashes are placed by mechanical means in an urn, so that the remains are not handled in any way.

An extraordinary result of legal proceedings for the demolition of houses unfit for habitation in Southwark shows that the reputation of English law as the embodiment of common sense is not always well founded. When the case came before Quarter Sessions the counsel representing the owner argued ingeniously that as nobody lived in the houses they were not "dwelling-houses" within the meaning of the Act under which they were ordered to be abolished. The

Court quite taken aback by this quibbling allowed the point to be remitted to a higher court which again sent the case back to the Quarter Sessions to determine how much of the premises was a danger to the public health. It was then alleged that that portion of the property had been demolished. Although the Vestry were not satisfied with the condition of the property, no order could be obtained and each side had to pay its costs.

SOCIETY PROCEEDINGS.

AMERICAN ACADEMY OF MEDICINE.

Twenty-fifth Annual Meeting, Held at Atlantic City, June 2 and 4, 1900.

FIRST DAY—JUNE 2D.

The meetings were called to order at 11 A.M. by the President, Dr. G. Hudson Makuen of Philadelphia. The Secretary, Dr. Charles McIntire, read the minutes of the Columbus meeting. The Treasurer reported that the Academy is free from debt, but that the balance on hand is not as large as usual. The year has been marked by several losses by death.

Among the Fellows elected to the Academy were Drs. O. A. Embury of Massachusetts, Ella B. Everett of Philadelphia, Thomas Snyder of Niagara Falls, A. O. J. Kelley of Philadelphia, J. Addison Joy of Atlantic City, Judson Daland of Philadelphia and W. R. Powley of Atlantic City. Drs. Risley and Carhart were appointed Auditing Committee, and Drs. Connor of Detroit, Jackson of Denver and Wilson of Columbus were appointed on the Nominating Committee.

Principles Respecting Specialism and Advertising.—The Secretary read the report of this Committee, which first defines the word specialism, as used by the Committee and presents the following propositions: (1) Specialism is not only desirable; it is unavoidable. (2) It is proper for a physician to seek to perfect himself in the direction of his greatest ability, even to the neglect of some other field of practice. (3) A specialist as well as the general practitioner may have a practice directly with his patients, or indirectly through consultation. (4) In his direct practice, a specialist ought not to be an exclusivist. In his consulting practice, a specialist stands in a different relation to his fellow-physician than do general practitioners in consultation. He is rather a coadjutor than a consultant. (6) Specialism *per se* does not create discord in the harmony of professional intercourse. (7) The time to enter upon a specialty cannot be predetermined by rule.

As to advertising: (1) No physician can escape advertising. (2) The true physician serves humanity first, the earning a livelihood being secondary. (3) Any method of advertising reversing this order is not to be commended. (4) Any

method of advertising which only seeks to inform the public that the advertiser is ready to be of service is permissible. (5) The above principles are fixed, their application varies with the environment. (6) Regulations restricting advertising should be equal in their action.

The Medical Aspect of the Home.—A Symposium on this subject was then presented in several papers.

The Essentials for a Healthful Family Existence.—Dr. Rosa Engelmann of Chicago read a paper on this subject and stated that healthy family-life depends on health, character, intelligence, industry, frugality, mutual affection, forbearance and the wherewithal to furnish a happy and healthy environment. Of supreme importance for the development and maintenance of these attributes is the separate-housing system. Among the essential conditions mentioned are fresh air and sunshine, adequate pure water-supply and good plumbing, healthful employment, healthful recreation, educational facilities.

Early Training to Avoid Degeneracy.—Dr. J. Cheston Morris of Philadelphia furnished as a text an incident of a little girl poutingly disobedient and the necessity of an early training in submission to authority. Acts speak more effectively to children than mere exhortations or commands. Dr. Morris stated that the training of self-control must begin early in life and that the reign of law and the influence of patient example are necessary to bring them about. Heredity so-called is often but the unconscious imitation of the parents' peculiarities by the very young.

Medical Supervision of Children in Their Homes.—Dr. J. Madison Taylor of Philadelphia said that the child is supposed to be capable of satisfactory development if allowed moderately good opportunity and environment, and is seldom or never systematically directed in its physical growth or development. The consequence is that very many faults of both mind and body are acquired, many of which seriously disable the subsequent activity of the child. He stated also that no attention is paid to the mating of the parents, as is done in the case of domestic animals, and consequently many faults of inheritance or heredity show themselves. He showed that the province of the physician is limited as yet to the relief of actual illness and to repair the effects of disease. If only he were encouraged to direct the growing child his province as an apostle of preventive disease would enable him to accomplish infinitely better results than merely the repair of damage. The question of motherhood was discussed and the difficulties which arise from her lack of knowledge of those things which constitute a good mother. He stated that the first thing needed is that mothers should realize that the best specimens of human beings are not likely to come from haphazard up-bringing. He thought it safe to assume that skilled direction from a medical adviser will soon become recognized as of the greatest importance and that the children of the poor should be provided with

opportunities for skilled physical direction. This could only be done by educating the public to realize the importance of this fact and by securing the cooperation of teachers of all grades in furthering such work.

School Hygiene and Medical Inspection of Schools.—Dr. W. M. Carhart of New York said that school-life should be harmonious with, and supplementary to, home-life. The growth of the child in bodily vigor, in strength of character and in intellectual attainments, should be as continuous at school as at home. School hygiene was divided into: (1) Hygiene relating to the personal habits of the child, necessity for cleanliness both of body and clothing. Avoidance of infection and exclusion of contagious cases. Physical basis of vice. Vicious habits to be discovered and corrected. (2) Hygiene in relation to methods of instruction. All children are not alike and should not be taught as if they were. Backward and dull children need special care. An inattentive child is usually defective in special senses and may be possibly slightly deaf. Weak eyes should also be borne in mind. (3) Hygiene in reference to the school environment. In this connection the writer said that school-buildings should be well located with adequate playgrounds, well furnished and built and with dry cellars. Good ventilation and clean rooms and lavatories with modern plumbing are also necessary. Desks and seats should be adjusted to the size of the children.

Defectives and Delinquents Inside and Outside the Family.—Dr. James W. Walk of Philadelphia gave the sociological definition of defectives and delinquents. The influence of defectives on other members of the family circle was considered, as was also the influence of aggregate life (in hospitals, asylums, etc.) on defectives. The influence also of family-life on defectives was spoken of. Delinquents and their environment were discussed in a similar manner. The author said that efforts to benefit defectives and delinquents should be consistent with the welfare of society in general.

Alcoholic Intoxicants and Home Sanitation.—Dr. J. W. Grosvenor of Buffalo considered the effect on moral character, intellectual development and physical integrity of its inmates. Two remedies of value for the relief of the unsanitary condition of the home were suggested, *vis.*, education and law. The writer considers that the enlightenment of the public along all sanitary lines is incumbent upon all boards of health. In the conservation of public health the medical profession has an important position. It is the opinion of the writer that the physician should not only by precept teach the danger of alcoholic intoxicants, but place himself and his home outside the use of alcoholic stimulants of every description. The clink of the inebriating cup should not be heard at his festive board.

The Hygiene of Vision in the Home.—Dr. S. D. Risley of Philadelphia made reference to the family living-room—its origin, pleasures and evils.

The natural and artificial lighting of the home were spoken of and the importance of sufficient and suitable illumination of the home in conserving the general health and vision of the family was emphasized.

Physician's Influence Regarding Vacation Schools.—Dr. Helen C. Putnam of Providence, R. I., said that inventions and municipalization have altered the popular minds that free schools were originally planned to supply and that to-day they should do more for citizenship, character-building and physical development. In the author's opinion liberally-educated medical specialists are needed in this readjustment. Reference was made to vacation schools started by philanthropists to protect from their environment the children living in the poorest wards, and developing into a permanent institution of direct influence upon educational systems. In these schools no books are used, pedagogic excursions into the country are made, manual training by wood and iron work is taught, esthetic development of music, color work, and outdoor sketching are encouraged, outdoor gymnastic games are indulged in and self-government in place of autocratic rule obtain.

Objects of Academy.—In his address to the Academy the President, Dr. G. Hudson Makuen, said that the American Academy of Medicine was instituted about a quarter of a century ago. Its chief object originally was to promote the higher education of medical men. Although it has been suggested that there appears to be no longer good reason for its continuance, never in the history of medicine, or in the history of the world, has there been so great a field for medico-sociologic investigation.

That the problem of the care and treatment of the so-called defective, delinquent, and dependent classes, has not been solved is shown by the authentic statement that these unfortunate classes are increasing in a proportion far greater than the increase of our population.

In precivilized times, only the fittest survived. Now we are endeavoring to establish a new law and our best efforts are being directed towards the survival of the unfit. We teach the lame to walk, the blind to see, the deaf to hear, and the dumb to speak.

Members of this Academy are formulating plans for a scientific process of selection. Its essential features may be surmised to be a revision in the immigration laws and the laws regulating the marriage contract. For those who respect not the law there has been suggested another remedy—that of asexualization. This with little doubt during the early part of the next century will become a legalized practice.

Our treatment of the degenerate classes has been inadequate and unscientific. Indiscriminate dispensary service is probably the most depraving and the most demoralizing of all the indiscriminate charities.

Pauperism, criminality, insanity are all one interdependent family, and if we would diminish

one, we must attack all three. Following close upon the evils of indiscriminate charity are those of indiscriminate institutionalism. It is said that the city of Philadelphia supports at an enormous cost a benevolent institution for every 10,000 of its inhabitants.

In the treatment of criminals, institutionalism has a somewhat wider field, because criminals must be detained for a longer or shorter period of time; but there is much room for improvement in the character and conduct of these institutions also.

The hope of the future of our country is in the young, and if we would strike at the very root of crime, pauperism and mental deficiency we must improve our methods of education. The chief feature of the education in the Elmira Reformatory which produces marvelous results is manual training. Brain power, as Professor Christian of Yale University has demonstrated, may be developed by mere muscle training, independently of any special mental activity and if this be true it is reasonable to suppose that the highest cerebral development must come from a judicious combination of mental and muscle action.

SECOND DAY—JUNE 4TH.

At the opening of the morning session the Nominating Committee announced the following nominations: President, Dr. S. D. Risley of Philadelphia; Vice-President, Dr. C. M. Culver of Albany, Dr. Rosa Engelmann of Chicago, Dr. G. G. Groff of San Juan, Dr. W. C. McClintock of Detroit; Treasurer and Secretary, Dr. Charles McIntire; Assistant Secretary, Dr. Alexander Craig of Columbia, Pa. The selection of time and place of meeting was placed in charge of the Council. The candidates were elected as read.

Dr. Grosvenor of Buffalo in referring to one of the papers on the parental teaching of children spoke of a custom of some parents in teaching their children to call the parents by their first names. He had observed this custom in his own city. He feared that if a strong protest were not made against it the custom would become more prevalent.

In the discussion of the paper of Dr. Engelmann of Chicago, Dr. Knopf of New York thought that while very desirable the separate-housing system seemed impracticable. He thought the solution of the problem could be more easily secured in the improvement of the tenements, the destruction of old tenements and the erection of new with new appliances of sanitation. In reference to the early training of children he suggested that the whole problem might be solved by adding to the higher schools for girls a chair of practical motherhood.

Dr. Connor of Detroit thought that the great underlying principle of the papers and discussion was an attempt to find out the weak methods in our art of training men.

Relation of the Academy to the Medical Course.—Dr. Howard S. Hansell of Philadelphia read

by title a paper on this subject, considering the topic under three heads: The State, the School, the Individual. The purpose of the paper was to advocate the admission of the college-bred man into the second year of the medical course.

The Opportunity of the Small Medical College.

—Dr. Bayard Holmes of Chicago in this paper referred to the fact of the tendency toward large classes not being consistent with good pedagogy and to the small class and individual supervision being possible in the small school. As requisites were mentioned: A few teachers and leaders of men, with time and adequate salary; suitable buildings and laboratory equipment; a small hospital under the complete control of the college; a well-selected working library, containing the material for the study of medicine; intimate relations between the various departments; a curriculum granting freedom to teacher and student. All of these requisites, it was stated, are possible to the small college.

Neglected Clinical Opportunities.—Dr. S. A. Knopf of New York read a paper on this subject and endeavored to show that in spite of the vast progress many of our medical colleges have made during the past year toward a more thorough curriculum, our clinical teaching is still very deficient, not from any lack of clinical opportunities, but from the neglect to utilize those available. The writer contended that the essentials for a college graduate leaving college feeling that his clinical teaching, if not quite equal to that of any hospital graduate, is at least nearly so, were: (1) A cooperation of all the medical colleges located in one medical center for the purpose of a general and equal utilization of all the clinical material of their city. (2) The appointment of every physician and surgeon attached to a subsidized hospital as a clinical teacher independent of college affiliation, and the payment of a reasonable fee to these clinical teachers for their services rendered as teachers to the students. (3) The suppression of all didactic lectures for second-, third- and fourth-year students during the morning hours. (4) The obligatory presence of every second-, third- and fourth-year student in his capacity as senior or junior interne at the clinic or at the daily hospital visit of his teacher. (5) The keeping by the clinical teacher of a record of attendance and work, to be counted in the final examinations.

Experiences of a Volunteer Surgeon in the Philippines.

—Dr. H. P. Ritchie, late Captain and Assistant Surgeon, 13th Regiment, Minnesota Volunteers, St. Paul, said with reference to the transport service that the causes of complaint and discomfort during the first expeditions were unnecessary as shown by the pleasant experiences of the home voyage eighteen months afterward. The effect of the campaign before Manila upon the future health of the troops was considered. The condition of Manila at the time of its occupation and its transformation under American rule was described. The climate was discussed, and the diseases among the troops briefly con-

sidered, with their prophylaxis and their danger to the civilian. The paper closed with a plea for instruction in tropical diseases.

"Good Form" in Professional Cards.—Dr. Charles McIntire of Easton in this paper referred to the source of gratification to the Fellows of the Academy of Medicine that there had been almost no necessity to discuss the individual actions of its members. Last year an exception was taken to the wording of a professional card, and the secretary was instructed to correspond with the member whose card was criticised. The present paper was the result of that correspondence classifying a number of professional cards from various parts of the United States.

Medical Editor for the Daily Journals.—As an argument for this need, Dr. Pyle called attention to an article recently appearing in the New York Herald entitled "Sleep-Cure for Nervous Diseases." This cure consisted of "eight grams of bromine every two hours in a glass half-full of water." It was further stated in this issue that the discoverer of this rest-cure maintains that rest—absolute, prolonged rest—is the one thing which persons suffering from nervous disorders stand most in need of, and that they can obtain the rest through the agency of 'bromine' better than in any other way.

The Mission and Duties of a True Physician.

—Dr. C. F. Ulrich of Wheeling, West Virginia, in this paper said that only he could be regarded as a true physician in the strictest interpretation of the word who is endowed with the peculiar talents necessary for the work belonging to that noble and laborious vocation; who has acquired the high order of general and special education essential to successful work; who never relaxes his efforts to gain more knowledge in his profession as his horizon extends and as new discoveries are made. The true physician should perform the part of an educator by instructing his clients in maintaining good health.

Psychology as Preliminary to Medical Education.

—Dr. W. J. Herdman of Ann Arbor, Michigan, said that normal anatomy and histology are essential to a right understanding of normal physiology. Psychophysiology must be known if we would correctly interpret psychopathology and create a rational psychotherapy. The author considered that at the present day a very small per cent. of candidates for the degree of doctor of medicine have pursued a systematic study of physiological psychology. Such knowledge was claimed to be essential to a right understanding and direction of educational methods since faulty methods of education result in disease. Functional disorders would be much better understood and more rationally treated were the physician well trained in psychophysiology. The mental element of disease is largely ignored by the practitioner of to-day, and in this soil left uncultivated by the scientific physician faith cures and other noxious weeds take root and flourish. The writer believes a broader preparation is needed to fit the physician to take possession of this field.

**NATIONAL CONFEDERATION OF STATE
MEDICAL EXAMINING AND LICENS-
ING BOARDS.**

*Tenth Annual Meeting, Held at Atlantic City,
June 4, 1900.*

THE meeting was called to order by the President, Dr. J. N. McCormack of Bowling Green, Ky.

The work of public interest of this session was the discussion of the subjects of the feasibility of uniformity in medical education and of interstate reciprocity in the granting and registering of licenses.

Cooperation of Medical Profession.—Dr. Emil Amberg of Detroit brought out forcibly the idea that if all the members of the medical profession of the United States or even a majority of them should unite in demanding reciprocity it would be granted. For true reciprocity it would be necessary to demand more uniformity in medical training. This can only be accomplished by a reduction of the number of medical schools and the elimination of the unsuitable ones. Private medical schools are in Dr. Amberg's eyes always a mistake and medical education should be under the care of the Government. Far from opposing improvements in medical laws, the lay press of the country can be depended on to second them if they are but once convinced of their real utility for the general public. This was the experience in Michigan when, in the absence of any law for the regulation of medical practice, the lay press took up the battle of the regular practitioners for the protection of the people from quacks. We are just entering upon the hygienic century. America will only take her proper place in the great advance in medicine that is about to come if her practitioners really possess the merit they are supposed to have.

Reciprocity and Medical Uniformity.—Dr. Spurgeon of Indiana offered a resolution providing for a committee that would suggest ways and means for the establishment of interstate reciprocity in licensure for the practice of medicine and for uniformity in medical education.

In discussing the resolution Dr. Wm. Warren Potter of Buffalo said that the present body is the only one of the many organizations meeting at Atlantic City at this time the members of which were officially recognized by State Governments. It was important not to derogate from their official positions. The question of advising legislatures as to reciprocity laws should come last. Uniformity in medical education is at present the desideratum. If this is obtained, then reciprocity will follow naturally. Uniformity in medical education can be advanced by the Confederation of Examining Boards and that of the medical colleges working together. Conference is needed, not hasty action. The motto must be "*festina lente*."

Dr. Egan of Chicago said that it was useless to hope for uniformity in legislation. It is impossible to convince legislatures of the crying

needs of their own State. A law for the regulation of medical practice comes back from the legislature so mutilated as to be unrecognizable. Under existing laws much can be done toward remedying the present situation. The Illinois Board of Health has passed a resolution to accept the licenses of other States that comply with their regulations. The Attorney-General says the Board has not gone beyond its powers in so doing. Other State boards can follow the example. The courts can be depended on to favor public utility in the interpretation of the law and reciprocity is distinctly of this character.

Dr. Harvey of Massachusetts said that it is useless to hope that any committee under the sun can influence legislatures to give up their individuality. States will not accept the standards of other States. There is often no reciprocity even in the public schools of different cities of the same State. It is a chimera to look for reciprocity. Uniformity in medical education should be the watchword.

Dr. McCormack said that in all this talk of reciprocity he was reminded of a country-inn with screens to keep out flies which really kept them in. Many States seemed willing to have reciprocity so as to get rid of their surplus medical men. Each State should keep down quackery by stringent laws. What is needed most now is a committee that will report and weed out paper colleges. Information as to the status of such colleges would be most welcome to medical examining boards and be very helpful.

The Committee on Reciprocity was appointed.

The officers of the National Confederation of State Medical Examining and Licensing Boards for the ensuing year are as follows: President, J. N. McCormack, Bowling Green, Ky.; vice-presidents, N. R. Coleman, Columbus, O., and J. W. Egan, Springfield, Mass.; secretary and treasurer, A. Walter Suiter, Herkimer, N. Y. The Executive Council remains unchanged.

AMERICAN MEDICAL EDITORS' ASSOCIATION.

*Annual Meeting, Held at Atlantic City, N. J.,
June 4, 1900.*

THE Association meeting was held during its annual banquet. The President, Dr. I. N. Love of St. Louis acted as toastmaster. The medical editors were welcomed by the Hon. Franklin P. Stoy, Mayor of Atlantic City, and by John F. Hall, Editor of the *Atlantic City Daily Union*. Among the other speakers who responded to toasts were Dr. Alonzo Garcelon of Portland, Maine, the oldest living member of the American Medical Association and one of its ex-presidents, Dr. Joseph M. Mathews of Louisville, a recent ex-president of the Association, Dr. Nicholas Senn of Chicago, Dr. J. V. Shoemaker of Philadelphia, Dr. W. C. Wile of Danbury, Ct., the *Danbury Medical News* man, Dr. Chas. H.

Hughes of St. Louis, Dr. Philip Marvel of Atlantic City, the Chairman of the Committee of Arrangements for this meeting, Dr. J. S. Stone of St. Paul, recently elected president of the National Association of Military Surgeons, and others. The meeting was most successful. One hundred and fifty guests sat down to the banquet which was prolonged until after 12 o'clock amid the pleasant reminiscences of the older members and the witty scintillations of their younger associates.

AMERICAN MEDICAL ASSOCIATION.

Fifty-first Annual Meeting, Held at Atlantic City, N. J., June 5-8, 1900.

[Specially reported for the MEDICAL NEWS.]

GENERAL SESSION.

FIRST DAY—JUNE 5TH.

THE proceedings were opened by prayer by the Rev. Frederick J. Stanley of Atlantic City.

A delegation of medical men from Columbus, Ohio, then presented a gavel for the use of the President of the Association at this meeting. The gavel is made of the wood of a tree from the family home of President McKinley at Canton, Ohio.

An address of welcome was delivered by Acting Governor Johnson of New Jersey. He said that the Governor is literally "half-seas over" at the command of his physician. There is only one man in New Jersey above the Governor, and that is his family physician who sent him abroad. Otherwise he would be here to extend the hearty welcome of the State of New Jersey to the American Medical Association. As it is, New Jersey in her Governor's absence receives her medical guests with heartiest greeting.

The Acting Governor recalled the fact that the first medical society in this country was organized in New Jersey. It first met in 1766 and its minutes are still in the possession of the New Jersey State Medical Society. New Jersey would be found on the present occasion to fully justify her past reputation as a cordial host for the unselfish profession which in this century have done so much for humanity.

The Hon. Franklin P. Stoy, Mayor of Atlantic City, extended the freedom of the city to the medical visitors. He promised that if any of the doctors should get into trouble the Mayor of Atlantic City would be in trouble with them. Meantime he bade them welcome and again welcome.

It was announced that a loving cup would be presented to Dr. Abraham Jacobi of New York by the Pediatric Section at their banquet on Tuesday evening, also that a public reception to him would be given at the St. Charles Hotel at five o'clock on the same day.

Dr. L. Duncan Bulkley of New York in the report of the General Business Committee said that during the past four years 2400 papers have been read before the Sections of the American Medical Association. This number is evidently beyond all reason. Some method of lessening the quantity must be devised. Meantime members are requested to present only papers that afford evidence of some real advance in medicine.

The President's Address was then delivered by Dr. W. W. Keen. It will be found elsewhere in the MEDICAL NEWS of this week.

The Treasurer's report was then read. During the year \$38,965 has been received, \$15,593 more than five years ago. Of this there is cash on hand \$13,556. There is \$3000 invested in the Indianapolis Loan and \$10,000 in United States Government War bonds. Total amount of funds on hand \$27,368.86. The Association is increasing not only in numbers but in the sense of responsibility of their duties. While but \$1500 in dues was received during the first two months of 1890, over \$15,000 was received during a corresponding time this year.

Dr. George H. Simmons, Secretary of the Association, then read his annual report. The Secretary then announced that the Third Pan-American Medical Congress will meet this year at Havana, Cuba, on Dec. 26th-29th. The American Medical Association has been requested to send delegates to this meeting. The Secretary reminded the members of the Association that the Pan-American Medical Congress owes its origin to their Association and they should take an interest in it.

Applications for membership in the American Medical Association have been received from Cuba, Porto Rico, the Philippines and from sixteen members of the Honolulu Medical Society. The Secretary suggested that the By-Laws of the American Medical Association be altered so as to admit these applying physicians.

A motion was then made that one delegate and one alternate from each State and Territory in the United States be appointed to attend the third meeting of the Pan-American Medical Congress at Havana, Cuba, in December, 1900.

A motion was then made that the Treasurer's and Secretary's reports hereafter be printed before the first general meeting and that they be circulated among the members of the Association for comment.

SECOND DAY—JUNE 6TH.

After the reading of the minutes of the first day's meeting the Oration on Surgery was delivered by W. L. Rodman, M.D., of Philadelphia. (See page 903 of this week's issue of the MEDICAL NEWS.) This was followed by the Oration on State Medicine by Victor C. Vaughan, M.D., of Ann Arbor, Michigan. (See page 907.)

The Business Committee recommended that the title of the Section on State Medicine be changed

to Section on Sanitation and Hygiene. This was approved. The committee recommended that the Committee on the Rush Monument Fund be continued. The Report of the Board of Trustees showed the receipts for the year ending December 31, 1899, including cash in treasury of about \$20,000.00, were \$109,115.33, the largest receipts in the history of the Association. The *Journal* expenses, plus the treasurer's expenses, amount to \$93,609.40. Total cash on hand \$14,355.51 and permanent investment in Government bonds and Indianapolis loan \$13,812.50, or an aggregate balance on hand of \$28,168.01. The average weekly number of copies of the *Journal* issued during the past year was 13,672. The trustees have decided to exclude from the advertising pages of the *Journal* all proprietary medicines advertised in the public press.

Dr. Geo. M. Gould presented the report of the Committee on Prize Essay. There were six competitors. The Committee was unanimous in awarding the prize to Dr. A. L. Benedict of Buffalo, New York. The prize is a gold medal about the size of a twenty-dollar gold piece, but twice as thick. Upon the reverse is a scroll supported by the emblem of Esculapius bearing the inscription "Awarded to A. L. Benedict, A.M., M.D., for Essay entitled 'Quantitative Tests for Proteolysis,' June, 1900." This is surrounded by raised letters, "Am. Med. Association Prize Essay." The obverse presents the usual eagle and shield—the National coat-of-arms. This is the first time that an essay has been considered worthy of the prize. The Committee recommended that hereafter the successful competitor be allowed to choose whether he will receive the medal or accept a bronze replica and the balance of the fund, \$100.00, in money.

Dr. Rodman presented the report of the Committee on the Senn Medal, awarding it to Dr. F. Gregory Connell of Chicago for an essay entitled "Exstrophy of the Bladder."

The Committee on the Rush Monument Fund reported that the total of the fund at present amounts to \$11,330.05. On motion the Committee was enlarged by three additional members.

THIRD DAY—JUNE 7TH.

The Oration on Medicine was delivered by John A. Witherspoon, M.D., of Nashville, Tenn. A full abstract of the oration will appear in our columns next week.

The special Committee on Revision of the Constitution and By-laws, which had been enlarged by the addition to it of the General Business Committee and the Board of Trustees, recommended that the clause permitting members by invitation be amended so that it applies only to distinguished foreigners and men of special note; that the time allotted to the orations be limited to forty minutes each and that the time-limit of discussions of papers before the Sections be five minutes for each man.

The Nominating Committee presented the fol-

lowing officers for the ensuing year: President, Dr. C. A. L. Reed of Ohio; first vice-president, Dr. A. W. Calhoun of Georgia; second vice-president, Col. Woodhull, U. S. A.; third vice-president, Dr. Philip Marvel of New Jersey; fourth vice-president, Dr. W. E. Quine of Illinois; treasurer, Dr. H. P. Newman of Chicago; secretary, Dr. G. H. Simmons of Chicago.

The following men were chosen to deliver the orations: Medicine, Dr. N. S. Davis, Jr., of Chicago; Surgery, Dr. John A. Wyeth of New York; State Medicine, Dr. Geo. M. Rober of Washington.

Four trustees were chosen: Drs. W. F. Porter, E. T. Ingalls, Rodman and Matthews.

St. Paul was selected as the place of meeting in 1901.

An amendment to the Constitution was passed which provides that after nineteen hundred and one, no graduate of a college course with less than three years of regular instruction in the various branches of medicine can be considered as eligible to membership in the Association.

SECTION ON PRACTICE OF MEDICINE.

FIRST DAY—JUNE 5TH.

Proposed New Section.—In his opening address Dr. Dock, Chairman of the Section, mentioned the fact that it is proposed to relieve the pressure of papers demanding presentation before the Section on Medicine by establishing a Section on Pathology. This would, however, emasculate the Section on Medicine by depriving it of the papers that had most scientific value. There is a strong feeling that for the accomplishment of really valuable work, the clinician should keep closely in touch with the pathologist. The present year's attempt to have an informal demonstration of pathological specimens promises to be most successful and instructive—a very valuable feature of the annual meeting. Arrangements should always be made, however, to supply the material from the country immediately around the place of meeting. This will save expense and the danger of the loss of valuable specimens in transit.

The Century's Clinical Work.—Life without self-examination is sure to be a failure, Socrates said; and our medical life will share this fate if we do not pause to pass it in review, to realize its failures and appreciate its tendencies. The end of the century seems an especially favorable moment to do this. In the first decade Corvisart recalled Auenbrugger's work and gave percussion a place in general medical diagnosis. Laennec in the second decade invented the stethoscope. For a time these methods did not spread. Then for a while overconfidence in them became the rule and now, as the result of confidence in other diagnostic methods, they are too often neglected. It is not so much that they are not known as it is that they are entirely omitted. In a recent case in which there was a transposition

of all the organs, the patient said he had been examined seven times for life insurance, and had been treated in a prominent hospital for pleurisy, yet the transposition of viscera had never been called to his attention.

Bright and Henle.—In the third decade of the century Bright showed the diagnostic significance of albumin in the urine and separated Bright's disease from other affections. In the fourth decade Henle showed the significance of tube-casts. The value of these tests has often been exaggerated, but the trouble too often in our day is that they are not used at all. The difficulty in the past has been that there were too many medical schools and that too much energy had to be expended in securing students rather than in training them. Fortunately, there is every reason to hope now that this condition of affairs is about to end. The improvement in medical education in this country toward the end of the century is most marked.

Instrumental Diagnosis.—Some of the newer methods of diagnosis, involving the use of apparatus, have fallen into ill-repute because too much dependence has been placed on them. None of the instrumental methods of diagnosis are capable of replacing entirely the old clinical methods. None of them will ever make up for the diagnostic skill to be gained only by experience at the bedside. Sometimes the instrumental diagnosis is committed to incapable hands, thus giving false ideas as to its value. The microscopic or bacteriologic expert should be chosen with as much care as an operator.

Medical Abuses.—Two of these are to be noted. Irregular practitioners are taking advantage of suggestive methods of treating disease which the profession should not entirely neglect. The success of such methods should show the regular profession their duty in the matter of suggestion as a valuable therapeutic agent. The manufacturing specialists occupy too much of the field of medicine. One large remedy manufacturer employs thirty clerks who do nothing but answer letters from doctors as to the treatment of disease. They know absolutely nothing of medicine nor do they pretend to know anything. They answer the questions proposed from the trade circulars of the manufacturer. This is just as it should not be. There is money in supplying the doctor with ready-made prescriptions and the work will go on until the physicians realize that their mistake will come back on themselves. The manufacturer is but a natural manifestation under the circumstances. "They come like water and like wind they go."

Biologic Examinations.—Dr. George M. Gould of Philadelphia bewailed the lack of biologic examinations of human beings. A few measurements are made in the athletic departments of universities, some physical examinations of school-children are made, careful examinations of recruits are instituted, and some psychophysical data gathered in the laboratories of physiological psychology, but that is all that is

being done for the important science of living anthropology. Dr. Gould suggests that careful examinations should be made at intervals and then compared with each other so as to note the deterioration when it begins to occur. The dental is the only branch of the medical profession which has succeeded in convincing its *clientele* that periodical examinations should be made whether symptoms exist or not. If this is advisable for so limited a sphere as the teeth, how much more so for important organs like the kidneys, the heart, the eyes and the ears! These organs do not give symptoms at the beginning of an affection but only when it has advanced, often to a hopeless stage. How often is hopeless kidney- or heart-disease discovered at some chance examination! Mental and nervous diseases are, as a rule, discovered too late for therapeutics to be of any use. Preliminary symptoms are utterly neglected. Periodical medical examinations would remedy this evil. The data of such examinations would be precious material for a comparative study of men. This would work a revolution in anthropology.

Specialists and Generalists.—The establishment of the custom of such examinations would restore the general practitioner to his dignity and position. As it is, the specialists are encroaching so much upon the territory of the general practitioner that he has really the narrowest specialty of all. He is coming to be scarcely more than a passer-on of patients to others, and, unfortunately, ethics will not allow the specialist to divide the fee with him.

Unless he is endowed with permanent anorexia and lives in a climate where clothes and houses are not needed, the poor general practitioner will be in a sorry plight. Perhaps it is providential that our new possessions, the West Indies and Philippines, are wonderfully favored by nature. If the conviction of the necessity for avoiding disease while in health, not merely looking for cure when diseased, has gained ground, the care of the health would once more be entrusted to the family doctor and he would occupy his old place of honor.

In the discussion Dr. Stockton of Buffalo said that the data suggested by Dr. Gould would be eminently applicable to the problem of heredity. If comparative anthropometric measurements and the records of physical examinations and pathologic conditions could be filed away, we would at the end of the next one thousand years know something definite concerning the questions of heredity. As it is our advance along this line is most problematic.

The Hospital Clinical Laboratory.—Dr. C. N. Camac of New York said that the hospital and ward clinical laboratories are of so much service to the clinician as to be practically indispensable. Wherever introduced they have proved their usefulness. Certain objections to them are unfounded. It is said they occupy too much room, but all that is necessary is a space six by eight feet and a window. The essentials are really a

window and a table. It is said they are dirty, but a glass-covered table can be easily cleaned and the objection falls. Reagents that are poisons may fall into the hands of patients, but if this danger is really feared, they may be kept under lock and key. Residents, it is said, will appropriate its apparatus for their own use. This can be avoided by knowing, before appointments as residents are made, the character of the young physicians. The matter of expense is by no means as forbidding as is claimed. The original installation will cost in proportion to the quality of the microscope that must be purchased, but \$200 will suffice for everything and that, too, of good quality. The maintenance is not expensive; \$50 a year will be ample and \$30 a year has been known to prove sufficient.

Blood-Examinations.—Dr. M. Howard Fussell of Philadelphia said that the examination of the blood gives such valuable information that it should not be neglected. He gave some examples of its value from his recent practice. In the case of a child taken with a sudden chill there was a remission and then after twenty-four hours another chill. This was repeated. The blood-examination showed that no plasmodia were present. The absence of the malarial parasite directed attention to the lungs where on the fourth day an apical pneumonia developed. In our day malaria should never be diagnosed unless the plasmodium has been found. The abuse of the diagnosis malaria for intermittent or remittent temperatures is now absolutely unjustified. For the diagnosis of the anemias blood-examination is most important. Not long ago a case of weakness and pallor, with loss of weight, in a physician led to the diagnosis of tuberculosis. The doctor himself, because of an enlarged spleen and some febrile temperature, diagnosed malaria. A blood-count showed the presence of 175,000 leucocytes. The case was one of leukemia. Recently a case diagnosed as cancer presented itself at the dispensary. Blood-examination showed that it was really a case of pernicious anemia. The use of Widal's test solves many of the problems, heretofore most knotty, which are prone to gather round the diagnosis of typhoid fever. Thousands of cases would doubtless have been saved during the late war by appropriate treatment, if the contract medical surgeons had used this important diagnostic method. Where leucocytosis exists typhoid is not present. In a recent case the patient had typhoid four years ago. The occurrence of fever led to the application of the Widal test which was positive. There were 20,000 leucocytes present, however, and the infection proved to be tuberculous. Dr. Fussell does not mention staining methods, because they require special skill and paraphernalia. Blood-counting, however, may be done very simply. The apparatus may be carried in a bag. If the blood be properly diluted when fresh and then kept in a tube closed by rubber caps, it is unnecessary to bring a microscope to the bedside. Dr. Fussell exhibited the bag in which he carried his instru-

ments. It is about the size of the ordinary physician's "grip."

In the discussion Dr. Osler said that the ward clinical laboratories spoken of by Dr. Camac have now become a necessity. It is extremely interesting to have brought out how little is needed for their equipments. One item of the equipment that Dr. Camac did not mention is very essential—a good supply of cortical substance properly trained. As to Dr. Fussell's bag, it is a model for the general practitioner of the country. It is into the hands of a man who carries a bag like this and has the brains to use it that Dr. Osler would rather fall, if he were ill, than into the hands of many a pretentious theorist.

Etiology of Dysentery.—Dr. Simon Flexner of Philadelphia gave some details of his experiences in the Philippines when detailed by the United States Government for the study of dysentery. Two classes of cases were readily distinguished clinically—the very acute and the chronic. We are accustomed to think of all dysentery in the tropics as an entity, tropical dysentery, with which the amoeba coli is associated etiologically in our minds. In the acute cases no amoebæ coli could be found. A bacillus was found very constantly, however, which resembles the bacillus coli communis not a little, but can be differentiated from it with certainty. This bacillus has also been found in Japan where a terrible epidemic of dysentery is raging. When the blood of a patient suffering from an acute dysentery is added to a culture of this bacillus, agglutination occurs. This has led to the attempt to make a serum for the disease. Animals can by the use of this serum be protected from doses of the bacilli that would ordinarily prove fatal to them. The serum has been used with reported good results on human beings in Japan. Since his return from Manila Dr. Flexner has seen a case of dysentery in which this bacillus was found. It occurred in a soldier returned from Porto Rico. At the autopsy the characteristic lesions of this form of dysentery were found. The ulcerations were superficial, not the deep erosions that occur when the disease is the amoebic form of dysentery. The bacilli had wandered into the mesenteric glands but not farther. There were no abscesses, such as occur so frequently in amoebic dysentery.

Chronic Dysentery.—A number of cases of chronic dysentery were observed at Manila, but the bacillus of acute dysentery was not found in the stools. A certain number of these began as acute dysentery and had the characteristic bacillus. Afterward they passed into the chronic form, the bacillus gradually disappearing. At first Dr. Flexner was under the impression that the rôle of the amoeba in tropical dysentery had been very much overdrawn and that perhaps it did not stand in a causal relation to the disease at all. Further investigation, however, seems to show that the amoeba does play an important rôle in the etiology of the chronic forms of dysentery.

Prospects of Immunity and Cure.—Dr. Flexner thinks that there is good reason to hope that the

disease can be much benefited by the serum that is prepared after the inoculation of animals with ascending doses of pure cultures.

In reply to a question of Dr. Osler, he said that it is not improbable that the epidemics of acute dysentery which occur in jails, work-houses, and asylums are due to this bacillus. Every epidemic of acute dysentery deserves to be investigated from this point of view. For thorough investigation cultures of the bacillus for comparative study are needed. Besides, the agglutinative test forms the very best diagnostic method. Dr. Flexner is ready to furnish cultures for these purposes to those who apply for them.

In reply to a question of Dr. Bridges as to the possibility of the coincidence of typhoid and dysentery, Dr. Flexner said that the two diseases may occur together. The agglutinative reactions of the two diseases are very distinct, however, and make the differential diagnosis very easy and assured.

Acute Tropical Dysentery.—Dr. Musser described a fatal case of dysentery in a soldier from Porto Rico in whom the characteristic agglutinative reaction described by Dr. Flexner occurred. He was thirty-two years of age, and had been fifteen months in Porto Rico, eight months of the time ill. He was extremely prostrated and very emaciated. There was marked pigmentation all over the body, not regular, however, but much darker in some parts. He suffered from boils, but cultures made from them were negative. He had the scaphoid abdomen of exhausted states. He passed no fresh blood and but very little mucus. Purpura was present and his gums presented all the characteristic appearances of scurvy. Only for the agglutinative reaction in his blood his condition would surely have been set down as scorbutic. There was no periodicity, no fever, but a tendency to subnormal temperature and steady progression downward. The post-mortem showed only superficial ulceration of the intestines and absolutely no multiple abscesses, although, as may be well understood, they were looked for very carefully.

In the discussion Dr. Osler said that the amoeba, while it has lost its prestige as the sole cause of tropical dysentery, still retains its character as a causal factor in dysentery even here at home. In six cases of amoebic dysentery that have come under his observation during the past year, not a single one gave the agglutinative reaction with pure cultures of the bacillus described by Flexner. There exists, then, a form of dysentery distinct from the acute type of the disease.

In closing the discussion Dr. Flexner said, in answer to a question from Dr. Vaughan, that while the bacillus coli communis sometimes causes intestinal disturbance, it probably never takes on a virulence that makes it the active agent of a serious epidemic.

Serumtherapy of Pneumonia.—Dr. J. C. Wilson of Philadelphia has used a pneumococcic serum prepared by Dr. MacFarland of Philadelphia for the treatment of pneumonia. In 13

cases at the German Hospital in which it was used 4 were fatal. During the same time 20 cases were under treatment at the Pennsylvania Hospital without serum with 4 deaths. In the serum-treated cases all the other remedies usually employed were administered. Ice-bags, stimulants, etc., were used as needed. Dr. Wilson thinks that the serum does good in relieving the symptoms, although it does not seem to shorten the duration of the disease, nor cause anticipation of the crisis.

Dr. A. O. J. Kelly of Philadelphia described an alcoholic case of double pneumonia in which the serum was used without effect.

Dr. Rochester of Buffalo said that large quantities of serum should be used. At first in diphtheria quantities entirely too small were employed.

Dr. MacFarland described the production of this pneumococcus serum by the inoculation of horses with ascending doses of pneumococcus cultures. It is difficult to keep the pneumococci virulent. Alternate generations of them are passed through animals for this purpose. The serum seems to protect against other micro-organisms besides the pneumococcus. The horse is very sensitive to streptococcus injections, yet in one case by mistake a horse immunized against pneumococcus was injected with 100 c.c. of virulent streptococcus culture without evil effect.

SECOND DAY—JUNE 6TH.

Pseudo Smallpox.—Dr. Happel of Tennessee described some cases of disease that have been occurring epidemically in the district in which he is health officer which have been called smallpox by the State board of Health of Tennessee but to him do not seem to be true smallpox. The differences are mainly that the constitutional symptoms of this affection are much less severe and it has practically no mortality. Then too this affection is always well on the eighth day just when the patient suffering from true and severe smallpox is beginning the fight for his life. In certain cases of this affection the eruption was of the confluent form yet no pitting resulted. In all of the cases the vesicular stage seemed to be the acme of the disease, pustulation did not occur and the cutaneous lesions disappeared by desiccation. The vesicles were always unicellular, never umbilicated; after being semi-spheroidal they became conical just before inoculation occurred. Vaccination seemed to exert no influence either on the occurrence, the course or the severity of the disease. After recovery vaccinations were successfully accomplished in a number of cases. While successful vaccination was running its course in a number of cases the vesicular disease supposed to be smallpox developed. Frequently in families where some were vaccinated others not the unvaccinated had the milder form of the disease. Many of the negroes objected to vaccination because it frequently incapacitated them for work for a week or 10 days while the disease gave discomfort only for a few

days at most. It came on with fever that reached at times 104° F. and was accompanied by severe pains in the back, headache and pains in the bones but all of these symptoms subsided on the second or third day and did not reappear later as they do in true smallpox. While genuine variola is very contagious this disease is not. In one instance children were sent to their homes from a crowded schoolroom after the vesicular stage of the disease had developed, they returned after two weeks, while the desquamative stage was in progress, yet none of the other children developed the disease.

Dr. Happel then said that he considers that the status of the present epidemic of so-called smallpox should be thoroughly investigated. Cases should not be labeled smallpox heedlessly for the results are apt to discredit vaccination and diagnosis. Certainly that has been the effect on public opinion in Tennessee.

Variola and Varicella.—Dr. J. J. Walsh of New York said that it must be borne in mind that the Vienna school of dermatologists, perhaps the most distinguished in the world, still insist that smallpox and chicken-pox are not essentially different diseases. Professor Senator of Berlin, who formerly believed in the essential distinction of these two diseases, has on many occasions in recent years expressed the opinion that they were related to each other. Varicella is for him variola modified by generations of vaccination and better hygienic conditions. Whenever he hears of varicella in Berlin he is almost sure to hear that some cases of smallpox have occurred in the city. Dr. Happel's skepticism then may prove most valuable for medicine if it will but encourage more careful investigation of this subject of cases intermediate between smallpox and chicken-pox by those who have the opportunities for the study of many cases of this atypical disease.

Vaccination in the South.—Dr. James of Missouri said that in his State the epidemic of smallpox had been allowed to spread by the foolish persistence of doctors in the diagnosis of chicken-pox after it had become evident that the disease was genuine smallpox. The salvation of the State had been accomplished by vaccination. This very soon put an end to the progress of the epidemic. In no case did it fail to do its saving work. The story of the recent epidemic in Missouri will prove an interesting chapter in the history of vaccination.

Smallpox Threatens the Country.—Dr. Chapman of Ohio says that while the doctors are quarreling over what name to call the disease the epidemic is constantly spreading. We have twice as much smallpox in the country now as at this time last year. Neglect of rigid precautions will surely result in a spread of the epidemic all over the country. Varicella does not appear in adults and wherever even the mildest cases of this disease has occurred it has always attacked adults rather than children. The talk about uncertainty as to the disease gives people a reason for neglecting quarantine precautions and tempts them to

conceal cases. Vaccination is being discredited and we are in the face of more danger from a general epidemic of smallpox than any time in 20 years.

Dr. Stewart of Philadelphia said he did not think that the cases described by Dr. Happel were true smallpox. The most careful investigation of the subject is required, however, because of the danger to the country.

Dr. McCormack said that such papers as Dr. Happel's were sure to do harm. There is danger from temporizing with smallpox now, but the deliberate introduction of doubt as to the diagnosis cannot fail to work serious mischief. He asked for a censure by the section of Dr. Happel's views.

Dr. Happel in closing the discussion said that too many health officers diagnose smallpox without proper examination of the patient. In one instance the official stayed without the house and judged through the open door that a patient had smallpox. Dr. Happel himself had seen hundreds of cases of smallpox close up. He does not think the present epidemic in Tennessee is smallpox and feels that if doubt will lead to more careful study of the cases then good for medicine will accrue.

Yellow Fever.—Dr. Wasdin of the United States Marine-Hospital Service discussed the natural history of yellow fever. The disease used to be considered endemic in our Southern States, but the proper enforcement of maritime regulations has caused it to be generally recognized that it is always an importation. In the old days yellow fever was considered to be causally connected with certain meteorological conditions. The disease occurred so commonly and with such virulence in warm, damp weather that a spell of rainy warmth was often spoken of as yellow-fever weather. The disease always decreased when it was dry and hot or in cold weather. When yellow fever occurred sometimes at the North it was often noted that it did not cease promptly on the appearance of frost, while at the South it usually does. The reason seems to have been that at the North the germ of the disease found favorable conditions for its growth in the artificial warmth within doors. In the South, on the other hand, the first frost usually comes as a surprise and finds the people unprepared for wintry weather. As a result the germ finds no shelter from the temperature which is the same within doors as without.

The Bacillus Icteroides as Cause.—A number of bacilli have been described at various times as causative of yellow fever. In 1889 Dr. Sternberg was detailed to investigate the subject and repudiated all the supposed discoveries of bacilli pathogenic for the disease. He thought that perhaps it was not caused by a bacillus but some other form of organism. In 1897 Sanarelli announced his discovery of the bacillus *icteroides*. At first this discovery was not well received. Dr. Sternberg found in Sanarelli's bacillus certain similarities with a bacillus described by himself

and called for recognition purposes the bacillus X. Drs. Wasdin and Geddings were sent last year by the Surgeon-General of the United States Marine-Hospital Service to investigate the subject of the etiology of yellow fever anew. They found Sanarelli's bacillus icteroides in over 95 per cent. of the cases examined and consider that there now remains no doubt but that the bacillus described by Sanarelli is the cause of yellow fever.

Many denied the pathogeneity of bacillus icteroides for yellow fever, because the bacillus stands cold well while yellow fever always disappears with the first frost. Dr. Wasdin, working at the Pasteur laboratory, recently found that rabbits inoculated with bacillus icteroides died from septicemia in eight days if kept at a temperature of 77° F. and in eighteen days if kept at 60° F., and did not die if kept at the ordinary temperature of the outer air. In intensifying cultures by passing them through animals, it is very important that the animals should be kept at the higher temperature mentioned.

Mode of Entrance and Spread of Germ.—Dr. Wasdin considers that the bacillus icteroides finds its way into the system through the respiratory tract. Here it is colonized for a time and the system suffers from its toxins. Later it finds its way into the blood-stream and produces a septic condition. This is the real danger of the disease. If the tissues and blood are examined before the septic stage they will be found to be sterile. Animals are susceptible to the disease. The mouse, the dog and the rat are spontaneously susceptible, that is they catch the disease during epidemics without any special inoculation. White mice are so susceptible to the disease that they need only to be kept in the room where other animals are suffering from the effects of the bacillus icteroides and without any contact with them they contract the disease. The horse and cow are artificially susceptible, that is, they may acquire the disease by inoculation. Animals serve to spread the disease. Their respiratory secretions carry the infectious material and spread it over a neighborhood.

Demonstration of the Bacillus.—While Sanarelli first described the bacillus icteroides and gave it its name he found it in only about 55 per cent. of his cases of yellow fever. His demonstration of its specificity for the disease was most incomplete. The work of Wasdin and Geddings has really established firmly the status of the bacillus with regard to yellow fever.

In the discussion Dr. Flexner said that even the work, very creditable though it was, of Wasdin and Geddings did not entirely establish as yet the specificity of the bacillus icteroides for yellow fever. The invasion through the respiratory tract, when for so long it seemed certain that infection must take place through the gastrointestinal tract, was also of great interest. This would have to be confirmed by other observers. As to the spread of infection through the lower animals, this is a very attractive hypothesis but

nothing more. It is extremely difficult to judge of the susceptibility of animals. In the laboratory we overwhelm them with the doses we inject. It would be necessary to determine whether animals take the disease under normal conditions or not. This we cannot decide by laboratory experiments. In closing the discussion Dr. Wasdin said that certain animals at least take the disease under what are practically the normal conditions required by Dr. Flexner. Mice need only to be kept constantly in the laboratory where work is being done with the bacillus icteroides and they sooner or later contract the disease. They can scarcely be said to be overwhelmed by injections of too large amounts of culture.

Malaria Symposium.—The secretary read the paper of Dr. Jesse Lezear, U. S. A., in which present-day staining methods for the plasmodium were described. The estivo-autumnal parasite is especially difficult to recognize. It is small in size, of indefinite outline, hyaline and almost transparent. Staining makes it very easy to see it, however. Cover-glasses for staining for the malaria parasite need not necessarily be examined at once. After taking they may be kept without deterioration for a month if too much evaporation is not allowed to take place. Many forms of birds contain hematozoic parasites that form interesting side studies to the malarial organism because of the light they throw on its life-history. The crow often contains such a parasite both of whose sexually complete forms are actively motile.

Malaria and Mosquitoes.—Dr. W. S. Thayer of Baltimore read a paper on this subject, most of the material of which appeared in an abstract in the proceedings of the American Association of Physicians and Surgeons. With regard to the mosquito as the only source of malaria, he added to what was said before. By analogy with other diseases we would not expect more than one method of communication of the disease. In malarial countries people are apparently perfectly protected if they sleep beneath mosquito-netting. The mosquito always exists in malarial regions, at least so far as has been investigated. Where even the particular type of mosquito exists that conveys malaria, malaria is not necessarily present. If patients suffering from malaria come into the region, then the mosquito becomes infected and spreads the disease. Whether the mosquito can acquire the parasite from any other source than man is an interesting question that cannot be settled as yet. Probably not, however. This explains why malaria as far as is known was never acquired primarily in uninhabited regions. It also accounts for the fact which has often been noted that explorers, after escaping the dangers of malaria in the interior, are attacked by the disease when they reach the coast. Here the mosquitoes are more plentiful and they have abundant opportunities to obtain the parasites from those suffering from the disease. Reunion Island, a French possession off the African Coast, had no malaria until 1869. There were, how-

ever, plenty of mosquitoes. In that year a party of colonists came from India, some of whom had suffered from malaria there. After this malaria became endemic on the island.

Treatment for the Limitation of Malaria.—First keep all cases of malaria under mosquito-netting. The yearly course of malaria seems to be this: Cases that occur in the spring-time are relapses from old malaria. It is by feeding on these patients that the mosquitoes acquire their parasites. If the cases could be kept from the mosquitoes at this time the spread of the disease would be prevented.

Secondly, destroy the mosquitoes if not by some direct agent, then by something that will limit their numbers. The *Anopheles* mosquito, the malarial bearer, lays its eggs in stagnant water. If all pools of stagnant water were removed then the pest would not breed.

Varieties of Mosquito.—L. O. Howard of the Bureau of Entomology of the Department of Agriculture described especially the ordinary form of mosquito and the malaria carrier. The easily-recognized distinction between them is their different mode of resting on a ceiling. *Anopheles*, the malaria carrier, poses his hind feet out almost perpendicularly to the plane on which he rests; those of *Culex* are almost parallel to that plane. The wings of *Anopheles* also contain certain markings that are not on the wings of *Culex*. The two mosquitoes may be rather easily distinguished at every stage of their existence. In the wriggler stage *Culex pungens* has a long respiratory siphon, while *Anopheles* has but a short one. *Culex* goes down in the water to feed; *Anopheles* feeds on the surface. Their respiratory apparatus is adapted to their respective habits in this respect. *Culex* larvæ can live in small pools. *Anopheles* prefer those which have a green scum, as they feed on algæ of which the green scum is composed. In the pupa stage the head and thorax of *Culex* are much larger than those of *Anopheles*. In the adult stage, when examined with a glass, it can be seen that the palpi of *Anopheles* are much shorter than those of *Culex*. There are three projections from the heads of mosquitoes; the middle one is the bill, the two side ones are the palpi. In *Culex* these three structures are all the same length; in *Anopheles* the two side ones are short, as if amputated. The note given off by *Anopheles* is four tones lower than that of *Culex*. It is easy to recognize them by their note alone if attention is given to it. A jar-full of each of the mosquitoes makes it possible to be sure of this.

Mosquito in Winter.—Dr. Woldert of Philadelphia described the finding of *Anopheles* in December and January in Washington; in Philadelphia up to the end of October; on the snow in Vermont in February, and at various times during the winter even at the North. There is no need, then, for the mosquito to migrate for long distances. It may persist throughout the year even in high northern latitudes. It has been seen on several occasions and at various places within

500 miles of the North Pole. When mosquitoes are found during the winter they are always encountered not far from standing water and in the neighborhood of an animal. Dr. Woldert has found that where the pupæ of the insects occur they may best be destroyed by the use of a solution of tobacco in kerosene oil.

Estivo-Autumnal Malaria.—Dr. Craig, U.S.A., said that all the cases of pernicious malaria that have been described are of the estivo-autumnal type. The recognition of this form of the disease was delayed, because its parasite is not easy to discover. The plasmodium estivo autumnale is only one-sixth the diameter of a red blood-corpuscle; it has hazy, indefinite outlines and its rapid movement causes it to be difficult of perception. Red blood-cells affected by the entrance of the parasite take on a greenish tinge and the corpuscles lose their regular form and may become crenated. At times there are two parasites, or exceptionally more, in a corpuscle. It produces a typical temperature-curve with very regularly recurring paroxysms unless its course is disturbed, as is only too often the case by irregular, insufficient doses of quinine. This gives rise to an irregular, intermittent temperature-curve that makes the recognition of the disease from the chart usually so very difficult.

Clinical Observation of Malaria.—Dr. Frank Jones of Memphis pleaded for more clinical observation in malaria. Of late too much theory has crept into the medical literature of the disease. Resistance to infection from malaria depends, in Dr. Jones' experience, on the conditions of life. The well-fed and cared-for escape longer and when affected do not suffer so severely from the disease as the poorer classes. Brunettes suffer oftener than blondes. The negro, however, does not suffer from chronic malaria. People are liable to put on flesh even to become obese. The negro does not suffer from malarial hemoglobinuria. This is evidently a toxemia due to chronic malaria. In this malarial manifestation quinine should not be used.

Malarial Hemoglobinuria.—Dr. Wm. Britt Burns, who has seen some eighteen cases of malarial hemoglobinuria, advises the use of quinine in the affection. For some years he treated malarial hemoglobinuria without quinine, but has reverted to its use with excellent results.

No Quinine in Hemoglobinuria.—Dr. Krauss of Memphis has treated in St. Joseph's Hospital, Memphis, fourteen cases of malarial hemoglobinuria without a death. This is a record set of statistics in the disease for this hospital in which many cases of the affection are admitted every year. In Dr. Krauss's opinion, malarial hemoglobinuria is a separate disease, or at least a symptom-complex. It is produced by causes which disturb the conditions of symbiosis that have been established between the host and the malarial parasite. For this disturbance quinine does no good. Stimulant supporting treatment is needed and gives excellent results.

(To be continued.)

SECTION ON SURGERY AND ANATOMY.

FIRST DAY—JUNE 5TH.

Surgery of the Stomach.—After calling the meeting to order the Chairman, Dr. H. O. Walker of Detroit, Mich., opened the scientific proceedings with a paper on the above subject, saying that the surgery of the stomach had to do with either benign or malign conditions. Among the former could be named congenital and acquired stenosis of syphilitic or other origin, foreign bodies, gastropnoia, muscular insufficiency, ulcer, and hour-glass contraction. The operations usually in vogue are pyloroplasty, gastro-enterostomy, anterior or posterior, of which the latter is the better. Instead of pyloroplasty, taking reefs in the wall is valuable especially in cases of gastropnoia which is so often associated with enteropnoia also. The author has seen but two cases of hour-glass contraction of typical form, each giving evidence of old ulcers as the cause. The early diagnosis of carcinoma by means of chemical examination of the stomach-contents and carefully searching for a tumor is the most important part of the case. If at all in doubt open exploration is necessary. Pylorotomy is available when the tumor is small, freely movable, and without adhesions. When this is impossible the posterior gastro-enterostomy is indicated to prolong life; it is most rapidly done with the Murphy button or with simple suture. The high mortality of these cases is due to bad technic, diagnosis so late that general decline has begun, and finally accidents and inexperience. Thorough and repeated lavage is a very necessary preliminary step. Non-perforating ulcers are often treated successfully internally, but if perforation have occurred then operate at once. The conclusions were in general that for benign conditions gastro-enterostomy or pyloroplasty, for malignant disease gastro-enterostomy, partial or complete pylorotomy, complete gastrectomy are the best methods. Exploratory incision is always justifiable.

Oration on Surgery.—This was delivered by Dr. W. L. Rodman of Philadelphia on the subject of "Non-perforating Ulcer of the Stomach." (See page 903.)

Dr. F. B. Turck of Chicago opened the discussion and said that the operative work on the stomach had at heart the removal of the benign or malign disease and the improvement of the patient. Among the non-malignant diseases amenable to operation are: (1) Pyloric obstruction from spasm of the pylorus without tumor; often these gave the worst symptoms from the active spasm due to the hyperchlorhydria and the multiple ulcers often about the antrum pylorus. (2) Gastric myosthenia which has resisted stimulation, gavage and electricity. Neuroses may underlie it and hypertrophy of the mucous glands, with overabundant mucus and much auto-intoxication, are usually distinct. (3) Hypertrophy of the muscle-wall or atrophy of the

glands is another common condition with severe suffering. In general, a weighing of the probable local lesion against the condition of the patient, immediate and remote, a careful examination and exact diagnosis by all possible means were essentials. The speaker had had much success with instrumental and radioscopic examination. The contraindications are bad general condition, inoperable cancer, undue local disease, organic heart, liver and renal disease. Better diagnosis and improved management before and after operation would tend to improve results.

Asphyxia in Narcois.—It had been the intention of the speaker, Dr. C. Fenger of Chicago, to read a paper on "Anterior Transverse Gastro-Enterostomy With Splitting of the Anterior Half of the Intestinal Wound." The plan had been to avoid persistent regurgitation of bile and death. In his first three cases he had succeeded, but failed in the fourth. Hence the method had failed of its promises. Attention was called to the procedure, recently followed at Bonn, of doing a gastrostomy at the same sitting and passing a tube into the descending loop of intestine and beginning the feeding at once. Too few had been done in this way to indicate its value.

As to dyspnea during narcosis and after operation about the jaws and mouth by falling of the tongue and epiglottis over the larynx, the speaker said that pulling the hyoid bone forward with a sharp hook is better than prying open the jaw and pulling the tongue forward. This method is applicable to cases of bony ankylosis of the lower jaw, of partial and total extirpation of the tongue or flow of the mouth, and of removal of the central part of the jaw bone, depriving the tongue of its anterior attachments. His preference is for a loop of silk passed about the bone through a small incision and then fastened suitably for support. His experiments on the cadaver showed that in the horizontal position the base of the tongue and the soft palate meet; with the head extended they separate slightly; still more if the tongue is drawn forward, if the jaw be now pushed forward the larynx comes into view, especially when the tongue is strongly pulled on; with the mouth shut pulling the hyoid bone forward opens the glottis freely, and traction on the tongue at the same time opens the throat best of all. In this way probably aspiration, bronchitis and pneumonia will be lessened, because when the throat is partially closed relatively small amounts of secretion do much harm.

Treatment of Cholelithiasis.—Upon this theme Dr. W. J. Menas of Columbus, Ohio, said that early diagnosis is important to avoid the complications and sequelæ of permitting a case to run on, sepsis, ulcers, contractures, folds in the ducts and chronic inflammation. There is no one symptom except finding stones in the feces which is absolutely certain. The author has had twenty cases; ten operated on with no deaths, and one faulty diagnosis; of the others three autopsies confirmed the diagnosis and two passed stones

and got well. The greatest number of stones he had ever removed was 230 and the largest quantity of pus was one quart. Recurrent colic, gastric disturbances, fever, rigors, nausea, vomiting, jaundice, pruritus, constipation, local tenderness over the colon and right kidney, pain in the abdomen and transferred to the shoulder, bile in the urine and local peritonitis were present in many or all of his cases. The prodromates had often been constipation, migraine, biliary urine, tinged sclera, ashy stools. Pain alone may come from inspissated mucus, cholecystitis and gallstones. In the latter the pain is brief, high up, and occurs three hours after eating and often is followed by nausea, vomiting and jaundice. Jaundice is often absent. Tenderness goes also with inflammation, tumor and stone. A floating kidney is movable and has the colon in front of it. The preventive treatment is to make the bile watery by giving salines, mineral water, calomel, rest and good diet. After the stones appear operation is usually necessary and at an early moment to prevent the stones doing harm.

Cholecystectomy and Removal of the Mucosa of the Gall-Bladder.—Dr. W. J. Mayo of Rochester, Minn., stated that radical removal of the gall-bladder was a necessity for gunshot and bad crushing wounds, for extensive phlegmonous, gangrenous inflammation and for malignant disease. For the permanent relief of obstructions of the cystic duct after a cholecystotomy, when the rest and drainage had failed to restore the lumen of the canal, one could choose a cholecystectomy or excise the mucosa down to the stricture. The former has many well-known risks. In his hands in 7 cases the latter had given good results. The technic is to approach the bladder through a new wound, respect all the adhesions formed for the primary operation, open the bladder below its fixation to the abdominal wall and peel off the mucosa down to the stricture, cut it across and then peel off the rest to the cicatrix. Drainage soon causes shreds of mucosa left behind to disappear, and the wound may then be closed.

Early Operation for Biliary Calculi.—There is a strong resemblance between the management of cases of appendicitis and of biliary calculi, said Dr. M. H. Richardson of Boston, Mass. The stones should be removed just as soon as the diagnosis is established to avoid the probability of the complications and sequelæ, suppurative cholecystitis, ulcers, contraction of the bladder, obstruction of the bile-ducts, etc. The earlier the operation is done the better the general local conditions for the surgeon and the patient alike, as in the appendix. The onset of cholehemia in obstructed cases is always bad. The conclusions reached were: (1) Operate early if the diagnosis is definite. (2) Explore early if it is doubtful to make it definite. (3) Facetted stones in the stools, with single or repeated attacks, operate. (4) Repeated attacks with or without stones in the stools, operate. (5) Continuous, repeated or great tenderness over the gall-bladder, operate.

(6) Repeated moderate attacks, operate. (7) Non-facetted stone with a single attack, do not operate. (8) In short, regard the case exactly as an appendicitis and operate before suppuration, impaction, perforation and death can occur.

SECOND DAY—JUNE 6TH.

Permanent Fecal Fistula.—One important detail of this procedure was amplified by Dr. J. A. Wyeth of New York City in case of permanent colostomy for inoperable conditions of the lower bowel itself or of the surrounding pelvic viscera which may occlude the rectum by pressure. The advantage of his suggestion lies in the fact that it may be carried out as part of any of the well-known methods of artificial anus formation. The point is simply to render the part of the intestine distal to the anus quite straight and short by traction upon it, then by traction on the proximal end create a large artificial loop whose dependency lies below the level of the opening and forms a pocket in which feces will store, as they do in the loop of the sigmoid colon. Only when this new sigmoid flexure becomes full will the discharge take place, namely, twice or thrice daily and usually in a manner to give the patient warning and avoid the unexpected flood of matter which make artificial ani so intolerable to the patient and to society. Dr. Wyeth prefers sutures to the glass-rod support. Further, he draws out eight or nine inches and by folding over and suturing the mesentery *en masse* to the bowel obtains a stiffening for the spur. Here silk running sutures are the choice. A knuckle three-quarters of an inch long is left exposed, the peritoneum is stitched all around to wound and to bowel, the skin is reinforced and after twenty-four to thirty-six hours the opening in the loop is made under cocaine.

Intestinal Exclusion.—This paper was read by Dr. John A. Evans of Chicago in behalf of Dr. J. B. Murphy of Chicago who was unable to be present. Its object was to show the present status of the Murphy button in intra-abdominal surgery. Up to April 1, 1900, there have been 1620 cases of use of the device since eight years ago when Dr. Murphy first tried it on the human being. The statistics have special reference to the unfavorable cases and show a mortality of about 20 per cent. which with improved and early diagnosis, prompt and more skilful technic should be reduced in the future to 10 per cent. or less. Gastro-enterostomy by all known methods shows a mortality of nearly 39 per cent., with the button about 20 per cent. Entero-enterostomies without regard to the means used 60 per cent., with the button alone about 19 per cent. of all cases. There had been only eleven cases of cholecystenterostomy done before the button was introduced and 156 since. No deaths have occurred under its employment while the total rate is nearly 15 per cent. This list of 156 reports excludes 11 done by Dr. Murphy himself since 1895. The grand total of 1620 records has no

respect whatever to the general and local condition of the patient, the knowledge, skill and experience with the button of the surgeon and goes back to 1892 when the invention was first published. The advantages of the button method, set forward by Dr. Murphy and now agreed with for the most part throughout the world, are (1) no suturing necessary; (2) great brevity of the operation; (3) edge to edge union of the same histological elements; (4) resulting cicatricial ring does not materially contract; (5) physiological processes of the intestine go on at once through the lumen of the button; (6) firmness of the union permits feeding to be begun at once; (7) adaptability to the gastro-enterostomies which are finding wider indications and more frequent performance; (8) readiness with which even the inexperienced may with care use it. The cases reported of contraction of the scar have been due to the invasion of neoplasm in the bowel adjoining. Failures have been due to faulty technic. The objections to the button are (1) that its canal may become plugged with feces; (2) that the button may be retained. No deaths due to retention are reported in literature. Eleven cases of plugging with three fatalities in the 1620 reports are known. The same device is now used with satisfaction in anastomosing the ureters with the intestines and with the bladder. Some forty modifications or parallels of the device are known, the more important of which were discussed.

Obstinate Constipation.—Upon this important difficulty Dr. J. R. Pennington of Chicago said that the portion of the intestine from the external border of the left psoas to the anus constitutes the sigmoid colon and the rectum. That which has a mesentery is the true sigmoid, that without is the true rectum. In the collapsed and cadaveric state the sigmoid occupies the left iliac fossa, whereas distended it may occupy the right. The degree of distention and the freedom and length of the mesentery govern its position. The rectum is divided into compartments by Huston's valves, varying in number but usually three and of similar shape, interesting the circumference of the intestine for half to two-thirds of its limits and directed mostly upward toward the colon. Prof. Evans of Chicago made numerous examinations, photographs of sections of these valves for Dr. Pennington and found that some contain all the coats except the serosa, others only the mucosa and submucosa and still many contained portions of either or both musculares to a varying amount. The tortuosity of the sigmoid, the irregularity and deformity of the valves and the hypertrophy of the musculares form the principal primary causes of obstipation by aiding in setting up chronic interstitial proctitis which prevents the secretion causing dry stools and stiffening the valves, converting them from a physiological intermittent obstruction to a pathological and constant one. The surgical removal of these valves by cutting was in one case attended by fatal hemorrhage in another by general peri-

tonitis. To avoid these risks Dr. Pennington devised a clip which by pressure causes the center of the valve to necrose, leaving a deep notch and freely hanging halves of the formerly rigid continuous ridge of the valve. The clips and introducing instrument together with a proctologic table of his design were also shown. Numerous gross specimens, casts, colored plates and microphotographs made the points of the paper very lucid.

Dr. Tuttle of New York in the discussion said that he corroborated Dr. Murphy's claim that his metallic button could be indefinitely retained without damage. Dr. Wyeth's method of colostomy was good and probably realizes its aims, but he desired to emphasize its absolute restriction to the permanent artificial anus, because the carefully-constructed spur interfered with prompt reduction and necessitated opening the general peritoneal cavity, which should always be avoided in repairing artificial outlets. The speaker had often used the new method of Bailey of London and had excellent satisfaction. He prefers the glass-rod to any other form of support. In the rectum he had frequently demonstrated the existence of valves and regarded surgical treatment of them as often necessary.

Dr. Ellison of Illinois reported a case of a twenty-two-inch sigmoid with bad constipation.

Dr. Martin of Cleveland said that for six years he had treated the rectal valves as often pathologic and had examined and reported one in section in 1896. They caused hyperemia and dilatation of the sigmoid which often had to be diagnosed from simple catarrhal appendicitis. So-called annular stricture of the rectum is hypertrophy of the rectal valves; benign tubular stricture has, in addition, infiltration of the valve-base and adjoining wall with new lymphoid and connective tissue; non-malignant obstruction may arise from anatomical propinquity and overlapping of these valves. The consequences were straining at stool, dilatation and hyperemia of the sigmoid and intestinal autointoxication. Careful proctoscopy for diagnosis and valvotomy for treatment were his rule.

Repair in Intestinal Resection.—In the illustration of his points Dr. W. A. Evans of Chicago passed about slides and photomicrographs of end-to-end anastomosis, which was the true issue of his paper. There are no cases reported of secondary stricture after any of the methods of doing this operation and the danger appears to be very slight, especially when the Murphy button is employed. What contraction may occur is solely limited to the first six months. The only fibers which cause contraction of the scar are the circular ones, whereas the connective tissue fibers of the serosa, muscularis and submucosa are all longitudinal. Neither coat of the muscularis is found in the scar, hence, there usually is a depression in the mucosa to mark its site. The mucous layer in the Murphy button cases always forms a complete ring free of scar. The law is for scar-tissue fibers to arrange themselves always

along the line of tension, hence, in the gut lengthwise and in the heart with pull in all directions they have no definite arrangement. Again, the artificial opening closes only when not in use, namely when the original path in side-to-side union is again in function. Tubes subject to distention only have cicatrices, as the esophagus and urethra, while the small intestines have very rarely any, even after typhoid and tuberculous ulcers. In the Murphy button the circular fibers are cut lengthwise and have little or no pull on the scar; the longitudinal fibers are divided transversely and do pull but do not enter the scar-tissue as muscle-cells can not enter and bridge the new cicatrices. Entire apposition of peritoneum to itself is not as good as securing fibro-peritoneal apposition, usually stronger and just as prompt. The mucosa heals best and the muscularis least, hence, after ulcers we find the latter absent and the former completely restored. In general secondary stricture after end-to-end anastomosis is only a possibility, insufficient to contraindicate the operation.

Dr. F. H. Wiggan of New York discussed and supported the statements of the paper. As a rule, he prefers Maunsell's anastomosis without the lateral extra incision to the Murphy button.

Appendicitis.—Dr. Miles S. Porter of Ft. Wayne, Ind., rehearsed the frequency in which in his own experience and in literature simple acute and recurrent appendicitis, with or without abscess, are preceded by constipation of varying severity and degrees of chronicity or by recurrent or chronic catarrhal colitis, which may extend into and modify the true appendical picture. Other causes of appendicitis seemed to be childhood and adolescence and the uric acid diathesis, all associated more or less with colitis. Again possibly rapid and too eager eating might cause gastro-intestinal disturbance, then colitis, and, finally, appendicitis. As to the treatment of appendicitis, the writer pleaded for moderation in searching for the diseased organ. Incision and drainage are better in severe attacks, large abscesses, and septic, anemic and enfeebled patients. It substitutes a brief mild operation for a severe and more or less prolonged one and gives as good or better statistics in this class of patients. Recurrence according to literature takes place in 13 per cent., which is probably too high. A second operation for ablation of the organ can then be done just as safely as at the first sitting. To make all operations primary appendectomies would increase the mortality.

Appendicial Fistulæ.—Dr. J. B. Deaver of Philadelphia said these dreary sequelæ of appendicitis are not uncommon and unimportant to the surgeon and patient alike in the effects on the system and locally according to the organs involved. They always menace health and are avoided by early operation. There are two types, the internal and the external. The simple external fistulæ are practically sinuses going down to the bowel caused by foreign bodies, like gauze, too much drainage-tube, and the like. They may

have the lumen of an appendix, otherwise shut off from the cecum, discharging into them a mucous secretion. The fecal external fistulæ open at once into the bowel, either appendix or intestines, large or small, and at any point. Internal fistulæ open into any hollow viscus, rectum, bladder, ureters, bronchi or pleura. The complications following such a rupture make it anything but a desirable solution of the difficulty. The causes are usually abscess formation, migration of micro-organisms, separation of the appendix, too many or too tight sutures, too long use of drain-tubes, pressure necrosis. Early radical attack on the appendix cures and prevents the fistulæ. If the regulation of diet for solid feces and locally ordinary cleanliness and rest did not cure simple cases, exploration for the offending gauze or suture with curetting of the tract is indicated. If it lead down to an old abscess-cavity the usual wide-open method for healing from the bottom should be followed. In fecal fistulæ remove the remains of the appendix, break up adhesions, close the gut or resect and anastomose. Very many fistulæ close spontaneously if left alone, hence, excepting where the small intestine high up is involved and the nutrition is suffering, leave them alone to see what Nature will do. In general the best cure is the prophylaxis of operation in all cases of appendicitis as soon as the diagnosis is made.

Dr. Senn of Chicago opened the discussion and said 80 per cent. of all cases of appendicitis get over their first attack and of these half never have a recurrence. To operate on each case would, hence, be an error. Spontaneous rupture of abscesses into the cecum had best be left alone.

Dr. Price of Philadelphia agreed in the radical immediate operation as a rule. In the bad cases he likes free incision, irrigation and drainage with only gauze through an unsutured wound, after the colon has been widely freed and brought directly beneath it to make the drainage-tract free and straight. He reported 3 per cent. mortality with this method.

Dr. Dawbarn of New York said preservation of life is best done by the immediate primary operation. Fistulæ may be prevented by passing a purse-string suture wide of the appendical stump in sound bowel. Inversion of the gangrenous part, while the suture is tightened, is the last step.

Dr. Hamilton of Columbus, Ohio, spoke of the importance of counteropening in the loin if drainage were doubtfully efficient.

Dr. Mynter of Buffalo said portal pyophlebitis was a more important sequelæ of appendicitis, because fistulæ tend to close themselves.

Dr. Keen of Philadelphia said no rule can be laid down, but that he preferred to regard each case as a law to itself as to when to operate, but no case should be allowed to go beyond two invasions.

Dr. McRae of Atlanta, Ga., had had recurrence of the inflammation in 75 per cent. of his cases of simple incision and drainage and had

seen practically all develop hernia within three years. Hence, early operation is best. Fistulae had been well treated by him by invasion of the intestinal lesion and suturing over it with four or five layers of sutures.

Dr. La Place of Philadelphia, Dr. Murphy of Chicago, Dr. Gray of Jersey City, Dr. Boldt of New York, and Dr. W. Easterly Ashton of Philadelphia all agreed in the necessity of primary operation at the time of diagnosis as no one can foresee the results of delay.

(To be continued.)

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

FIRST DAY—JUNE 5TH.

A Review of Obstetrics and Gynecology.—The address of the Chairman, Dr. W. E. B. Davis of Birmingham, Ala., was in the main a general review of the progress in obstetrics and gynecology during the year. He stated that obstetrics cannot be practised with absolute success except by the obstetric surgeon, the gynecologist. He strongly advocated the use of rubber gloves in obstetric work, and believed that no obstetric complication existed that could not be successfully dealt with with gloved hands. We should as a nation learn from the experience of Austria and Germany. There the teacher of obstetrics is also the teacher of gynecology. This is also true in England. More than fifty per cent. of the cases coming to the gynecologist are obstetric in origin, and when this fact is borne in mind it will be clearly recognized that the two branches should be associated in the one man. In the near future he believed that there will be fewer specialists but more learned. This he regards as an indication of progress. It is difficult to obtain the *tactus eruditus* even with much experience. How, then, can the general surgeon be able to recognize cases which are often obscure even to the most expert gynecologist? The exalted position which gynecology holds in this country is due largely to the special journals devoted to the subject and to the national associations devoted to this line of work, including the American Gynecological and Obstetrical Association, the Association of American Obstetricians and Gynecologists, and the Southern Association of Gynecologists. In the latter organization are included the leading surgeons, obstetricians and gynecologists of the South. Its Transactions have been complimented both at home and abroad, and include contributions from eminent men, such as Battey, McDowell and Hunter McGuire. Battey's operation was a great mistake, but his influence on gynecology was positive and widely felt. Still, his teaching has probably been productive of more harm than that of any other man. Through his influence the neurologists were driven to the opposite extreme and repudiated operations that were fairly and urgently indicated. Undoubtedly in many instances in which there are marked neuroses, they have developed in women so predisposed,

but all cases are not of this nature. Too much has been claimed for vaginal section, yet it has a large field. Peri-uterine and parovarian abscesses should be drained by this method and then, if need be, abdominal section should be performed later. It is gratifying to note the increasing popularity of the round ligament operation. A patient should not be compelled to wear a pessary when the safe operation can be done. If need be the abdomen may be opened in these cases and the round ligaments shortened in that way.

Surgery of the gall-bladder and gall-duct has been much improved during the last few years. The methods of closing the abdominal incision have never been satisfactory. The majority of operators still employ the through-and-through method. Others use the tier sutures. The author is in the habit of uniting the aponeuroses and muscle by tubes threaded with silkwormgut secured by shot; the fat is closed around the tube, and the skin united by silk or silkwormgut.

The Value of the Angiotribe in Vaginal Celiotomy.—Dr. J. H. Carstens of Detroit read a paper on this subject. He stated that conservative surgery is now predominant and that efforts are made to preserve as much of the pelvic organs as possible. Through the work of the French surgeons vaginal surgery has come permanently forward, but now the time has come when the surgeon selects his cases for either route. The author prefers vaginal celiotomy, but has encountered one great obstacle, *vis.*, the tying of the broad ligament so that hemorrhage will be controlled. He has tried the clamp and has seen sloughing follow with prolonged convalescence. The angiotribe has greatly simplified matters. Take, for instance, the case of a young girl with an acute displacement and prolapsed and adherent ovaries. In these cases he prefers to do a vaginal celiotomy, remove the ovaries and apply the angiotribe. He made a study of this instrument last year in Europe and now employs it in abdominal and vaginal hysterectomy without ligatures. He does not endanger his patient's life in doubtful cases, however, by not using ligatures. The best cases for the angiotribe are small ovarian cysts, pus-tubes, and inflamed appendages. He believes the angiotribe will do more to lessen suffering and death than any other instrument recently devised.

Angiotripsy in Abdominal Surgery.—This was the title of a paper read by Dr. H. M. Taylor of Richmond. His experience sustains that of others. The instrument is easy to use and safe as to results. Post-operative pain and shock are less severe in character and less lasting, and convalescence sets in sooner. He has had no bad results. Only once has he failed to secure perfect hemostasis. He has used the angiotribe by the abdominal route only in ten or fifteen cases during the past year. He has not used it in septic cases, because he has not had any such cases. He applies the instrument for a period of three minutes.

Improved Technic in Major and Minor Surgery.

—Dr. H. P. Newman of Chicago read a paper with this title. He stated that we owe to anesthesia, hemostasis and antisepsis the great improvement in modern technic. The least possible violence should be done to delicate structures to secure the best results. Bad results follow improper dilatation of the uterine os, resulting in tearing which leaves scar-tissue that will not dilate at subsequent labors. Improper curetting is also a source of much evil. He judges a gynecologist not so much by the manner in which he does a hysterectomy as by the way in which he does a curettement. He especially advises care in the performance of tracheloplasty. Fissures, fistulae, sinus and the like, should be dissected out entirely. In his experience the best results follow this method. In vaginal hysterectomy he has used the angiotribe with good results. He was the first to introduce this instrument in this country. He believes it is even more valuable in abdominal section. The instrument should be faultless in make and well tested. It should not be used in fragile tissue, the stump should not be handled after the angiotribe is removed, nor is it necessary to cauterize the stump nor to use drainage. In softened and edematous tissue there is some danger of tearing, as with the use of the ligature. The instrument requires the same care in use as do other instruments.

Dr. Wathen of Louisville thought that trouble follows the use of too many instruments. He has not used the angiotribe, but he recognizes the fact that there may be a field for it. He believes, however, that it prolongs the operation, especially in cancerous cases.

Dr. Goffe of New York has had a little experience with the angiotribe and desired to say a good word for it. He has found that it simplifies operations *per vaginam* and is perfectly safe. He tested it in two cases of advanced carcinoma involving the broad ligament and found that even in cancerous tissue it acted just as well as in sound tissue. He recently resected a cancerous rectum through the vagina, dragging down the rectum. It was necessary to restrict the mesentery, which he did with much satisfaction. In cutting off the rectum he first pinched it with the angiotribe and then stitched the end of the rectum to the skin, and had no oozing or hemorrhage. The angiotribe has a wide range of application. He has also used it in hemorrhoids. It is easy to handle. He learned its use in one and a half or two minutes. The instrument he employs is Tuffier's.

Dr. Bovée of Washington was glad to hear such good results from the use of the instrument. He does not think that the operation is shortened by the use of the instrument, which he considers a clumsy tool. The French journals have recently reported a number of deaths from hemorrhage after its use, and yet the instrument was devised to prevent this accident.

Dr. Ashton of Philadelphia will not use the instrument, since with it it is impossible to get the same support of the broad ligament in hysterectomy

which follows the use of ligatures. He does all his work by the abdominal route. He emphasized the fact that care is necessary in the technic of curettement and dilatation. If the dilatation is made too rapidly laceration will follow. It should be slowly performed, the operation requiring at least ten or fifteen minutes.

Dr. Porter of Indianapolis wished to know how to apply the angiotribe and which instrument to use. He has had a case in which fatal hemorrhage followed the use of the instrument. He would like to know how many pounds of pressure should be employed and how long the process should be continued.

Dr. Boldt of New York has used the angiotribe since it was introduced by Dr. Cleveland. It will undoubtedly control hemorrhage, but it is not in the least degree superior to ligatures. He feels more secure with the use of the latter than with the use of the angiotribe, and in his experience the operation is prolonged by the use of this instrument.

Dr. Carstens, in reply, stated that he will use any instrument which gives him good results. He does not remove healthy ovaries nor those which are but slightly prolapsed, but if these organs give pain or are much displaced, they must come out. He considers the angiotribe invaluable in hysterectomy in certain cases, but does not think it is useful in cancer of the uterus. In such cases he prefers clamps, and in other cases ligatures.

Dr. Newman stated that he performs a tracheloplasty, or plastic operation, on the cervix and not trachelorrhaphy. He does not confine himself to any one plastic operation. He does not think time is lost by the use of the angiotribe. It facilitates the operation, gives perfect hemostasis, and does away with the use of ligatures. If hemorrhage occurs immediately after the removal of the instrument, he would apply a ligature.

Myofibroma Uteri.—Dr. H. J. Boldt of New York read a paper with this title. He stated that the histogenesis of fibromyomata is still disputed. He believes that they arise from the muscularis and are pure myomata. Fibrous connective tissue is absent until the tumors reach the size of $\frac{1}{4}$ cm. A variety of the dermoid tumor—the adenomyomata—has given rise to much discussion. If these spring from the endometrium, they lie centrally in the uterine wall and show the tissue of the endometrium. The greater number of adenomyomata have their origin in the Wolffian body. Cullen described three cases and agreed with the views of von Recklinghausen as to their origin. If a fibromatous uterus be examined the endometrium will be found most dense. The muscular wall undergoes hyperplastic changes, and inflammatory changes are found in the tubes and ovaries. Various changes may take place in fibromyomata. They may disappear without treatment before the menopause and after parturition. Sarcomatous degeneration must be considered the most serious change.

In lymphangiectatic myomata there is much danger of the walls of the lymph-vessels becoming sarcomatous. Inflammation, gangrene, and other degenerations may take place in the tumor. If a symptomatic cure can be secured in cases of these tumors the radical operation should not be done. The social standing and the age of the patient should be considered. Thyroid and mammary extracts will control some of the symptoms, but do not greatly affect the size of the growth. Electricity in the form of galvanism has a limited use in the treatment of fibromyomata.

Arrhythmia Cordis Complicating Fibromata Uteri.—Dr. J. W. Bovée of Washington read a paper on this subject. He stated that the complications of fibromyomata are becoming constantly more numerous. A condition of arterio-fibrosis is considered by many to be present in their growth, but he has not noted its presence in any case. Organic cardiac disease is often associated, but cardiac symptoms are rarely present. He noted in the case of a colored woman with a large fibroid an irregularity of the heart-action and pulse. The heart was otherwise apparently normal. Cardiac tonics and rest in bed gave no result. Under the influence of ether the action of the heart became regular, but the irregularity returned upon recovery from anesthesia. Different forms of arrhythmia are reported and these may be associated in the same patient. Their presence does not contraindicate operation, but the patient should be clearly watched and the ether administered with care.

SECOND DAY—JUNE 6TH.

Parturition as Factor in Gynecic Practice.—Dr. J. M. Duff of Pittsburgh read this paper. He said that parturition is the principal factor in the production of the morbidity encountered in gynecologic practice. He considered that over 50 per cent. of all gynecologic cases can be charged to parturition. This includes the large number of cases resulting from abortion. Aside from inversion of the uterus and fistulae due to pressure, nearly all of the cases are primary, resulting from laceration, sepsis, or both combined. An important question is, What are the best means of avoiding these primary cases? Modern obstetric and surgical aseptic practice has done much to correct the trouble. He believes that more than 50 per cent. of all gynecologic cases would be eliminated were thorough asepsis adopted and at the same time the obstetric technic improved. In nearly every case of post-partum sepsis there has been some defect in the technic, a defect of omission or of commission. Occasionally the nurse, the friends of the patient, or the patient herself, will be at fault. The laity is largely of the opinion, and erroneously, that lacerations of the birth-canal are always the result of carelessness on the part of the obstetric attendant. This belief is fostered by certain practitioners who claim that they never have a tear in their practice and have never seen one. It is

no disgrace for lacerations to occur, although complete laceration of the perineum is rare in the hands of an accomplished obstetrician. A slight laceration in primiparae is the rule rather than the exception. Such tears should always be reported to the patient and an attempt made at repair. This operation will not always succeed primarily, but the effort should be made. A laceration of the cervix should also be repaired at the earliest possible moment after labor. If these cervical tears are not repaired morbidity will result. The day of antiseptic midwifery is past. Its principles are not only harmful, but absolutely dangerous. The true antiseptism consists in a normal condition of the excretions and secretions of the body and true asepsis consists in maintaining a normal condition of these functions. Antiseptic douching of the vagina is both harmful and dangerous. If the vagina must be cleansed it should be scrubbed, not douched. The vulva is the normal habitat of germs and it should always be thoroughly cleansed. Care should be taken to remove the placental tissue in full in every case. This precaution should include all placenta succenturiata and placenta spuria. These extra placenta are much more common, he believes, than is generally supposed. The routine practice of administering ergot after labor is pernicious and frequently results in the development of gynecologic troubles.

Dr. M. Price of Philadelphia wished to endorse heartily the method of antiseptic treatment as advocated by Dr. Duff. In nine cases out of ten puerperal sepsis results from the useless adoption of chemical antiseptics. Intra-uterine irrigation and the use of the curette after labor are often productive of fever. The finger is the safest guide. The mortality of women to-day is greater than at any time in the thirty-two years of his medical experience.

Dr. Dunning of Indianapolis thought that Dr. Price had stated his case a little too forcibly. He had, however, seen some of the pernicious results of intra-uterine douching unnecessarily adopted. Displacements of the uterus due to subinvolution is a common condition. This subinvolution can be largely prevented by a restoration of a lacerated cervix at the proper time. An examination of the patient should be made at the expiration of six weeks and if the laceration be found it should be repaired at once.

Dr. Joseph Price of Philadelphia said that the mortality of obstetrics at present is larger than formerly, due to a mixture of gynecology and obstetrics. With Parvin there died the last obstetrician in America. The present obstetricians are largely gynecologists. What is needed to-day are enthusiastic obstetricians. The syringe as found in the household, and which is even known as the "household" syringe, to be used by all the members of the family, is a great source of infection.

Dr. Miller of Syracuse said that mixed infections and most cases of pure streptococcal infection will die as a rule, while infections from the

bacillus coli communis and the saprophytes will generally be recovered from. As to the best treatment of these cases he would endorse serum-therapy.

Dr. Tuttle of Massachusetts would especially urge the careful preparation of the patient before delivery, including the use of the antepartum douche. This preparation should be carried out just as carefully as for an abdominal section or a vaginal hysterectomy. Secondly, a careful investigation of the parts should be made immediately at the close of labor to discover lesions of the birth-canal and retained products.

Obstetrical Advances of the Last Half-Century.

—Dr. A. H. Halberstadt of Pottsville, Pa., stated that he was within a few months of completing his fiftieth year in medicine. During this time gynecology has made the advances and obstetrics, with but few exceptions, has been at a standstill. The Transactions of the Obstetrical Societies are now almost wholly gynecologic. Before and during the time of Hodge and Meigs the Chair of Obstetrics was the leading one, due to the personalities of the men who filled it. The two most remarkable events of the half-century are the introduction of anesthesia and asepsis. To these may possibly be added symphysiotomy. Anesthesia has not been generally adopted on account of the fear of post-partum hemorrhage. He stated that anesthetics cannot possibly do any harm in childbirth and cannot fail to do good. The condition of the heart and lungs should contraindicate the administration of ether.

Pelvic Disease and Nervous Affections.—The symposium on the relation of pelvic and intra-abdominal diseases to nervous diseases was opened by a paper read by Dr. H. O. Marcy of Boston entitled "Causal Relation that Intra-Abdominal Diseases Bear to Nervous Disturbances Recognized by Gynecologists, but Ignored by Neurologists." He stated that genius, if developed too far, may become eccentricity and ultimately mental derangement. The wise gynecologist should be a physician, surgeon, and neurologist as well. For many years he has advocated the study of the pelvic organs in the insane. He enlarged on the importance of the physiologic function of the reflex action of the nervous centers in health. The normal relationship includes afferent fibers, nerve-centers, and efferent fibers. The deep reflexes are of but limited value. There are certain groups of symptoms that are indicative of local lesions. These he considered in relation to their bearing on the reproductive organs of woman in health and in disease. A careful knowledge of the pathologic reflexes is of the first importance in the proper differentiation of organic lesion in the pelvic structures.

Menstrual Autotoxic Neuroses.—Dr. Arthur Johnstone of Cincinnati presented this paper. Every healthy child-bearing woman has a superabundance of nourishing material in her blood which must be disposed of in some way. This material is given to the child *in utero* and after birth is also received by the child during the

process of lactation. When menstruation returns the excess is disposed of in the menstrual flow. A superabundance of nourishment in the blood, not to mention an additional quantity in the intestinal tract, is a very dangerous condition for both man and beast. If the fetus does not consume the excess the mother must get rid of it. The first symptom of this dangerous condition is kidney breakdown. If the eliminating organs are acting well the material will be effectually handled. There are individuals, however, whose emunctory organs are deficient, and these are the patients who develop nervous troubles and eclampsia. In young girls with faulty menstruation the symptoms are due to the failure of elimination of the excess of nutritive substances in the system. This is true of all nervous symptoms shown by gynecologic patients.

Traumatic Malformations and Insanity.—Dr. George H. Noble of Atlanta, Ga., said that neurologists have much more opportunity to see pelvic cases in the insane than have the gynecologists. In reply to the question indicated by the title of the paper which he sent to various neurologists throughout the country, some said directly "No." Others claim that only indirectly does traumatism react upon the mind, and others still that the action is direct and removal of the cause results in a cure of the mental and nervous symptoms. Gynecologists do not operate for the insanity, but to relieve the bodily sufferings. Accidents from childbirth, sepsis, adhesions and masturbation are some of the local traumatisms associated with the mental and nervous condition. The general obstetrician and practitioner should make a search for these local conditions. He has never personally seen mental defect associated with any form of double uterus, although authorities speak of this complication. Price says heredity is rare as a cause. Others say it is a common factor in the production of the mental and nervous diseases. The probability is that a bad family history is common in this condition. Aside from personal observation the author's paper was based on many replies received from alienists and gynecologists of the United States relative to the subject. He concluded that traumatisms and malformations of the female genital apparatus are indirect or exciting causes of insanity. Many operations have been done with satisfaction and uniformly good results. No special form of insanity follows the above condition. Some institutions make a practice of examining the women for these local causes and are giving much attention to the gynecologic side of the question.

Dr. H. A. Tomlinson of St. Peter, Minn., spoke of a third element in the equation between pelvic disease and disturbance in the nervous system in women. He tried to show on general principles and by statistics that the essential element in the association of disturbances of the nervous system in women with pelvic disease, abdominal operations, and the like, is an unstable or defective nervous system in the woman. This may be de-

finer as the nervous potentiality of the woman. The fact that most do not become insane or develop any of the chronic neuroses shows that the disease or operation itself is not the direct cause of the nervous disturbance. He cited cases and presented other evidence to show that those women who develop the different neuroses in association with pelvic disease and after operation have a definite history of unstable nervous equilibrium or actual defect in development. The proof of this is furnished by the life-history of the female, the natural history of maternity, the influence of civilization and environment in modifying the process of generation in women and the effect of these changes on an unstable and hypersensitive nervous system. He reported five cases recently admitted to the hospital of women who had been operated upon and a part or all of the generative organs removed. None were improved as far as the mental symptoms were concerned. In primary degenerates, *i.e.*, those who become insane during the period of adolescence, the generative organs show all of the changes of senility. Puberty is delayed in these cases, the advent occurring at about seventeen years of age. Menstrual troubles and pelvic disease are often associated with neuroses, but bear no causal relation to the mental condition.

(To be continued.)

SECTION ON DISEASES OF CHILDREN.

FIRST DAY—JUNE 5TH.

Serum Treatment of Diphtheria.—The Address of the Chairman, Dr. Edwin Rosenthal of Philadelphia was devoted to a consideration of this subject. He stated that the position held by antitoxin in the treatment of this disease is due to the pediatricist. During the past year he addressed more than 4000 communications to physicians asking their views on antitoxin. The replies show a practical unanimity regarding the value of this agent. Statistics from the health boards and hospitals in 157 cities give a mortality of 38 per cent. without antitoxin, and 14 per cent. when it was used. A comparison of the antitoxins manufactured by Parke, Davis & Co., Mulford, and various other reliable firms, showed that all standard makes are good. The laboratories and methods are open to inspection and the ethical standards of the firms are high. The admission of diphtheria antitoxin to the pharmacopœia should be supported by all. The suggestion was made that the next executive committee investigate typhoid fever.

The session was devoted to papers upon feeble-minded children and nervous diseases.

Etiology of Idiocy and Imbecility.—Dr. Martin W. Barr of Elwyn, Pa., gave the results of a fifteen years' study of these conditions. The causes were grouped under heredity, malnutrition, and accident. Statistics were given from his own studies of 3040 cases and from other writers, showing the effects of heredity. In his own series

13 per cent. had a family history of imbecility and 5 per cent. of insanity. He fails to find consanguineous marriages a cause of imbecility, unless there is a neurotic tendency of some sort in the families of the parties who marry. There is a danger in such relatives marrying. Only 1 per cent. of his cases came from consanguineous marriages and he regards such union with but little apprehension when there is no family taint. The law should not lop off the branches of the tree by forbidding these marriages, but should begin at the root by forbidding the marriage of persons having a neurotic taint. Figures showing the relation of various neuroses and malnutrition following disease as etiological factors were given. There was a history of phthisis in 9 per cent. of his cases and of intemperance in 3 per cent. Under the head of accidents instrumental delivery seemed to bear a causative relation in 1 per cent.

Care of Higher Grades of the Feeble-Minded.—Dr. A. W. Wilmarth of Chippewa Falls, Wis., classes as of higher grade those cases in which the faculties which enable one to carry on the ordinary social duties of life are defective or wanting. Moral imbeciles also belong to this class. The distinction from a backward child is made by the development of the powers reaching a point where progress is stopped instead of only being slow. Treatment is best carried out in an institution where there is rivalry and the humoring of the family is not present to dull the activity of the child.

In the discussion Dr. Leszynsky said that the treatment was pedagogical and must be carried out by an institution or by persons at the home. Under proper conditions such individuals do better at home.

Dr. J. Madison Taylor said that he formerly believed the home treatment to be the best, but since studying the results of institutions he had changed his opinion. Such cases do better with others of the same degree along side of them as a stimulus. Great wealth might in a few cases give good results in the home, but for average cases institution training gives much better satisfaction.

Study of the Circulation in the Feeble-Minded.

—Dr. J. Madison Taylor read for himself and Dr. F. S. Pearce of Philadelphia the results of a study made on 935 children in the Pennsylvania School for Feeble-Minded, the lowest forms of idiots being excluded and only those taken in which there was a suspicion of circulatory disturbance. Of this number 72 were found to have definite lesions of the heart or vessels, 40 males and 32 females. In the majority of cases the vasomotor system was most at fault. As treatment of cardiac and circulatory defects causes an improvement in the condition of such patients, the recognition of the condition in early life is important.

In discussing this question Dr. Leszynsky stated that he did not consider that Dr. Taylor had proved his point. The circulatory disturbance is more likely a result than the cause.

Infantile Cerebral Palsies.—Dr. A. C. Cotton of Chicago classes under this head all conditions of impaired function due to a cerebral disturbance, even if there is no motor paralysis present, as in epilepsy, etc. A report of 25 cases was made. Of these 18 were females. The time of onset was before or at birth in 17 cases. Of 11 diplegic cases, 7 were idiots; of 8 hemiplegics only 2 were idiots. In only 2 cases were there athetoid movements and both of these were diplegics. In one diplegic there was no mental involvement, although other typical symptoms were present.

In discussion Dr. Leszynsky stated that every child suffering from epilepsy should be examined for the possible existence of cerebral palsy. A certain number of cases recover partially and attention is not called to the condition until epilepsy develops, when the parents bring the child for treatment. The presence or absence of cerebral palsy has a decided bearing on prognosis in such cases.

Dr. Griffith emphasizes this point and said that physicians often made mistakes by not attributing epilepsy, etc., to cerebral palsy. He called attention to the rarity of tremor as a post-hemiplegic symptom.

Dr. Cotton stated that the percentage of cases of improvement at home is very low and he is anxious to hear from institutions. One postnatal case, occurring at six months of age, has been watched by him, the man now being twenty-four years of age. He can use carpenter's tools and play in a band, thus being self-supporting.

The following papers were read by title: "The Importance of the Education of the Sense of Touch in Feeble-Minded Children and its Connection with Manual and Industrial Training," Dr. Fletcher Beach, London, England; "Physiologic Training of Feeble-Minded," Dr. S. J. Fort, Ellicott City, Md.

(To be continued.)

REVIEWS.

A Practical Treatise on Sexual Disorders of the Male and Female. By ROBERT W. TAYLOR, M.D. Second Edition. 8vo., 438 pages. Illustrated. Lea Brothers & Co., New York and Philadelphia.

It must be highly gratifying to Dr. Taylor that a second edition of his valuable work on sexual disorders has been so soon demanded by the profession, who, realizing the great value of his writings, will read with pleasure and much profit the present edition, which treats of these affections, both in the male and female in a masterly, scientific, and at the same time eminently practical manner. The various methods of treatment are given in detail, and will be found of great practical value to the general practitioner and specialist as well.

The chapters on the anatomy and physiology

of the sexual apparatus have been thoroughly revised and enlarged, as have also those devoted to sterility and sexual disorders in the female, which conditions are most satisfactorily dealt with in every respect, thus adding greatly to the value of the present work, in which the author deals with these peculiar affections in his usual clear, concise and practical manner, the result of careful and extended pathological research, together with an extensive and closely observed clinical experience.

The relation between chronic urethral inflammations and affections of the prostate gland and seminal vesicles to sexual impairment and debility is most clearly and convincingly brought out, and in these chapters much that is new, original, and interesting will be found.

After a careful reading we take great pleasure in recommending this standard and authoritative treatise to the student and practitioner, both of whom will be fully repaid by a perusal of its pages.

The book is profusely illustrated with new and well-executed colored plates and also half tones, the vast majority of which are from the author's personal cases.

The publishers, Messrs. Lea Brothers & Co., are to be congratulated on the general make-up and appearance of the book, which is all that could be desired.

Nervous and Mental Diseases. By CHARLES S. PORTS, M.D., Instructor in Nervous Diseases, University of Pennsylvania; Assistant Neurologist to the University Hospital, Philadelphia. Lea's Series of Pocket Text-Books. Lea Brothers & Co., Philadelphia and New York.

WHATEVER in the way of derogation or of praise that may be said of small manuals, the fact remains that for beginning students and for a large number of general practising doctors, such manuals, if conscientiously and ably prepared, are of very great service.

The exact proportions to be devoted to the different aspects of the subject are difficult to determine, yet in a book of this kind we believe that the author has been wise in devoting himself more particularly to general symptomatology and methods of examination as well as in the giving of a large amount of space to treatment. It can hardly be said that the chapters on mental disease are adequate. The chapter on hysteria is especially full, but in a country where this disease is comparatively rare, especially in its severer grades, the amount of space given seems out of proportion. Apart from such consideration, however, the work is an excellent one. It is convenient in size, its information is accurate and well digested and the mechanical execution commendable.

The work can be recommended especially to the beginning student who should not, however, rest content, for his knowledge of nervous diseases, on such an elementary manual.